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ABSTRACT

The Agency for Instructional Television (AIT) works with educational agencies in the United States and Canada as partners in the process of educational change through school television. The organization develops school television programming for consortia of state and provincial education agencies. Since 1970, it has completed nine major projects. In producing materials, the AIT uses a three phase development process. In the initiation phase, activities focus on determining needs and conceptualizing the project. In the production phase, the conceptualization is translated into designs for television programs and related printed materials, development of the materials takes place, and evaluation activities go forward. In the third phase, assimilation, the AIT assists with the integration of materials into the curricula of consortium agencies. Assimilation phase activities also include teacher inservice and orientation and community awareness programs. Appendices include a case study of the conceptualization of one programming project, a cost structure for consortium participation, some curriculum design examples, and an example of a teacher's guide. An extensive bibliography is also included. (LLS)

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Cooperative School Television and Educational Change

The Consortium Development Process of the Agency for Instructional Television

By John Middleton

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Table of Contents

Preface 9

Chapter One

The Agency for Instructional Television and Educational Change 11
  - School Television and Educational Change: The Evolution of an Idea 11
  - The Consortium Development Process 16
  - Summary 22

Chapter Two

The Consortium Development Process: An Overview 23
  - Introduction 23
  - A General Model 23

Chapter Three

Project Initiation 27
  - Needs Determination: Establishing Curriculum Consensus 27
  - Project Conceptualization 31
  - Forming a Project Consortium 36
  - A Summary Diagram 44

Chapter Four

Production 47
  - Developing a Curriculum Design 47
  - Materials Production 52
  - Instructional Design and Materials Production: Review and Case Example ... 64
  - Evaluation 67
  - A Summary Diagram 84

Chapter Five

Project Assimilation 85

Introduction: Verification, Utilization, and Assimilation 85

Two Assimilation Activities: Teacher In-Service Education and Information 86

Technical Stewardship of Materials 90

A Summary Diagram 90

Chapter Six

AIT in Perspective: Generalizations on the Consortium Development Process 93

The Conditions for Action 93

Key Elements of the Consortium Development Process 95

The Consortium Process and Educational Change: A Summary and Note on Theory 102

AIT in the Future 103

Notes 105

Appendices 109

A: Case Study of *Self Incorporated* Conceptualization 111

B: Cost Structure for Consortium Participation 115

C: Curriculum Design Examples 116

D: Writer/Educator Interaction in Design 121

E: Teacher's Guide Example 124

F: Production Scheduling 126

G: AIT Research and Evaluation Policy 128

Bibliography 129

Tables

Table 1: Genealogy of the Agency for Instructional Television 13
Table 2: The AIT Consortium Projects 17
Table 3: Comparison of Rights, Benefits, and Use for the *Self Incorporated* Project 39
Table 4: Formative Evaluation System 68
Table 5: AIT Information/Community Awareness Materials 89

Figures

Figure 1: A General Model of the AIT Consortium Development Process 25
Figure 2: Needs Determination Process 30
Figure 3: Consortium Formation Patterns (*Self Incorporated*) 41
Figure 4: Conceptualization Process 45
Figure 5: Curriculum Design Process 51
Figure 6: Flow Chart of Classroom Activities and Corresponding Observations 72
Figure 7: Attention Profile Form 73
Figure 8: Attention Profile—"Two Sons" 75
Figure 9: Attention Profile—"Pressure Makes Perfect" 76
Figure 10: Classroom Discussion Profile Analytic Form 78
Figure 11: Classroom Discussion Profile—"Two Sons" 79
Figure 12: Production Process 82
Figure 13: Assimilation Process 91

Preface

This is a report on the way in which the Agency for Instructional Television (AIT) works with educational agencies in the United States and Canada as partners in the process of educational change through school television.

Why a report on AIT? Perhaps the most compelling reason is that AIT procedures for cooperative development of learning materials appear to have established a viable pattern of action in a field (school television) that has sought one for more than a decade. This pattern touches nearly all state and provincial education and educational broadcasting agencies, bridging the gap between strong traditions of state and local control of curriculum and the necessity to pool resources for production of quality. It has created a new generation of school television materials, carrying design and creative production to high levels. It is a pattern that may have implications for cooperative action in other areas of education.

Thus this report is primarily for educators and broadcasters with interests and responsibilities in school television. It is largely descriptive, although the last chapter and portions of other chapters contain analytical components. With the full cooperation of the AIT staff, and the educators and broadcasters with whom AIT works, I have set out to show how AIT develops learning materials for consortia of state and provincial education agencies, to identify key elements and explain how the process of *cooperative development* works.

This is *not* a report on the instructional aspects of school television. There are many important issues associated with the use of television in classrooms: How should television materials be used? Are they appropriate for all areas of the curriculum? Is television effective; do children learn from television? Is it more (or less) effective than other learning materials? Is it more or less effective given the cost? How can school schedules, broadcast schedules, and various technologies be mutually adjusted to facilitate TV use? Do schools need television at all? Questions such as these have been addressed by other writers and researchers. Some have been answered satisfactorily; others have not.

This is also *not* a full, comparative report of the various mechanisms that have emerged in recent years for school television production. There are other collaborative arrangements; there are federally funded programs; there is the Children's Television Workshop. All of these are important. The subject here, however, is the consortium development process of AIT.

Commissioned by AIT, this report itself has been a collaborative project. The complex inner-workings of an organization do not spring to life without full and open cooperation from the key participants in that process. The candor with which AIT staff members have discussed their work—strong and weak points, successes and failures—has been remarkable. Equally important has been the willingness of educators and broadcasters in the states and provinces to share their perceptions of the consortium development process.

Information was collected through three series of interviews conducted at AIT headquarters in Bloomington, Indiana, in July and December of 1975 and May of 1976. Additional information was obtained through telephone interviews with officials in education agencies. I have spent considerable time analyzing AIT planning documents, and the completed instructional materials. The AIT files were open to me.

The study was further enriched by my participation as a consultant to a project, and by my exposure to school television in my home state, Hawaii.

As the report was written, AIT changed. Some of these dynamics are captured in the study, but to capture all would require writing the last chapter as the first rolls off the presses. As may be evident here, AIT passed through a major transition in the period 1977-78, moving from projects primarily in affective education to projects in cognitive areas of the curriculum. The consortium development process is changing to meet these new demands, but the basic philosophy and structures remain. This period of transition marks a useful boundary for the study, which is primarily about the AIT of 1973-77.

Dr. Jack Lyle, Director of the East-West Communication Institute provided valuable support for my work. I am also indebted to Dr. Wilbur Schramm, Dr. Syed A. Rahim, Dr. D. Lawrence Kincaid and Dr. Antonio V. Ulgado, colleagues at the East-West Center, who read early drafts and provided helpful criticism.

Special thanks are due my wife, Karen Middleton, an educator who has been a radio and television teacher, for careful reading and criticism.

John Middleton
Honolulu, Hawaii
Bloomington, Indiana
July 1975 to June 1977

CHAPTER ONE

The Agency for Instructional Television and Educational Change

AIT staff members say they are not in "show business," or even "TV business." They are, they say, in the "education business," part of the process of educational change and improvement. This reflects the dedication to a purpose that evolved over a period of some fifteen years: that school television should help to disseminate, rapidly and effectively, the best thinking and practice in important areas of instructional need.

School Television and Educational Change: The Evolution of an Idea

The history of school television in the 1950s and '60s may be described as technology in search of a role. The first instructional uses of the medium were mainly attempts to capture the "good" teacher for widespread dissemination at relatively low cost per pupil. Looked upon as an economical way to provide instruction during an era of teacher and space shortage, school television was characterized by local production, with virtually every course featuring a television teacher—the now notorious "talking face."[1] Although it addressed important areas of the curriculum, meager resources inevitably led to low levels of technical, creative, and instructional quality. In the words of a participant at a television conference during this period, school television was existing "in spite of itself."[2]

In the early 1960s the U.S. Office of Education supported demonstration projects to test the viability of instructional television libraries. The broad notion was that the best locally produced materials could be identified and exchanged, thereby avoiding duplication of effort. One of these demonstration projects was the National Instructional Television Library (NITL), which began in New York City as an activity of the National Educational Television and Radio Center (NET) and later moved to Bloomington, Indiana, under the auspices of the Indiana University Foundation.

As shown in Table 1, NITL was the organizational ancestor of AIT. Thus the "AIT role" in instructional television during this era was as a library of materials. Two regional libraries of instructional television materials also were formed at that time, and one continues to provide services to education today: the Great Plains National Instructional Television Library, located at the University of Nebraska.

During this period, roughly the early 1950s to the mid-1960s, the character of American instructional television was influenced greatly by the Ford Foundation, its Fund for the Advancement of Education, and the U.S. Government. These and other agencies not only established the delivery system, but also supported a number of innovations and experiments in televised instruction. Researchers were comparing television to other educational media and looking at it as an alternative way to teach. Large-scale systems experiments provided insight into the organizational and political conditions favorable to televised instruction.[3] Research on teaching with television yielded the general conclusion that students could learn as well from it as from other media.[4]

Little was known about the most effective ways to use television. It appeared that its successful use, like that of other instructional media, depended as much on the purposes and context as on any unique capability of the medium. There were also indications that the introduction of television into the classroom could spur change in the structural aspects of instruction—such as team teaching and the adoption of new curricula.

In sum, by the mid-1960s school television was still more promise than reality. Television could teach. It could have impact on the organization and structure of schools. Many believed it could be an economical way to provide instruction for large groups of learners. But it had yet to vindicate the faith of its strongest supporters.

Education itself experienced major changes during this period. Schools became a focus for innovation and change, although, as Harry Broudy said, "One could make a career of investigating the mice brought forth by the mountainous labors of some of the recent educational innovators."[5] The impact of Sputnik and the resultant National Defense Education Act on curriculum development in the late '50s and early '60s is well known: large-scale curriculum projects designed to improve teaching in science, mathematics, and foreign languages appeared, but with less than wide dissemination and acceptance.[6] The emphasis in these projects was on academic excellence. Then, during the mid-'60s, there was a shift to what Broudy calls the "new humanism": schools were now expected to take the lead in dealing with social problems—to redeem social ills of discrimination and oppression.[7] This massive reform effort, like its predecessor, faltered before the seemingly endless capacity of the schools to resist change.

Although researchers differ on the reasons why, they do agree that

Table 1: Genealogy of the Agency for Instructional Television

Date	Organization Name	Function	Auspices	Funding Source
January 1, 1962 April 30, 1965	National Instructional Television Library (NITL)	Distribution	National Educational Television and Radio Center	U.S. Office of Education
May 1, 1965 August 31, 1967	National Center for School and College Television (NCSCT)	Distribution	Indiana University Foundation	U.S. Office of Education
September 1, 1967 June 30, 1973	National Instructional Television Center (NIT)	Development and distribution	Indiana University Foundation	Indiana University Foundation/Users
July 1, 1973	Agency for Instructional Television (AIT)	Development and distribution	Independent	Users

educational change is difficult.[8] There is, however, general recognition that people lie at the heart of the change process, and that the teacher plays a central role. Curriculum developers saw this three decades ago. Alice Miel wrote in 1946, "Changing curriculum means changing people."[9] And it has followed, both from research and from common sense, that change is made easier when the people affected by it are themselves involved in the reform.

Thus, while school television was searching for identity, education itself was struggling with innovation and change, seeking ways in which the schools could respond better to the needs of society.

It was against this backdrop that AIT and its predecessor agencies (NITL, NCSCT, and NIT) worked to develop a useful role. In 1966-68 NCSCT held a series of assessment conferences, at which it sought to determine the quality of existing television materials. Attending were experts representing the leadership in major areas of the school curriculum. These experts concluded that nearly all instructional programming was of poor quality. They urged the development of new and better materials.

The first response of NCSCT, as it neared the end of government and foundation subsidy and was about to become the National Instructional Television Center, was to revise some of the best existing courses. While this was of some help, there was clear need for new production that would bring significant improvement in quality. But which curriculum area should be selected for the development of new materials? The decision was influenced by the experience of *Parlons Francais*, a television project in conversational French for the elementary school that had been distributed by NET. This series, though technically and creatively excellent, was not widely used. It was evident that the materials had been developed for a curriculum area not regarded as a high priority by the schools.

With this in mind, NIT chose to develop programs in physical education, a curriculum area of growing importance in the elementary school during the 1960s. Guided by leaders of reform in this area, NIT produced *Ready? Set . . . Go!*, a modern series in physical education. Again, quality was high. Again, utilization was low. It became apparent that the approach of the series was very much ahead of most thinking and teaching in the field. A new lesson was evident: the materials could not be too far in advance of current practice in the schools. The task now became clearer: to identify important curriculum needs and then meet them with materials that both reflected new thinking and content and were sufficiently understood to promise acceptance.

This principle of educational reform by television was expressed some years later at an international conference on instructional television. Influenced by their Hawaiian location, the conferees called it the "surfing principle":

> When used as an instrument of educational reform, television, like a surfer, must ride the forward edge of the wave. If it falls behind the wave

> of general change, it will miss the ride; if it starts too far ahead, it risks being knocked off the board. Or, in the terms most used at the meeting, the problem is to select the right wave within education where television can best be used, the right timing, the task it can do better than any media or methods can do. If we do that, it can go a long way. If not, it can flounder in a sea of dissatisfaction and boredom.[10]

Whatever the name of the principle, it appeared to be a good idea. The next step was to find a way to make it operational. How could curriculum needs be identified? Where were the new educational thinking and practice that met the demands of the model?

The consortium development process emerged out of the answers to these questions. Needs are to be determined by those responsible for education on the state and provincial level; the content and educational practice embodied in television series designed to meet those needs are to be verified by the same educational leaders. This now made necessary some form of structured cooperation between the television agency and educational leadership.

All of these ideas began to appear toward the end of the 1960s. At that time early childhood education seemed to be a national priority, an area of important need. The NIT staff set out to assess this need by consulting provincial and state education officers and leaders of professional associations. There was strong interest among these persons in the use of television in early childhood education; this interest was also reflected in widespread support for a conceptual paper that NIT had commissioned.

The problem of funding remained. While no one recalls the exact moment of the birth of the idea of cooperative funding by state and provincial education agencies, it came about from that strong interest in using television to advance early childhood education and in the curriculum concepts developed by NIT. Many education agencies were so committed to strengthening early childhood education through television that they were prepared separately to use whatever resources they had for program production.

The cooperative funding approach to the development of commonly needed television programming had certain obvious advantages. Commitment to a project by an education agency was an overt statement that the proposed project met important needs. In turn, this commitment would probably lead to more effective utilization of the materials. Perhaps most importantly, an agency funding a project would participate in its conceptualization and design and this would serve to assure content acceptance. Finally, there was the hope that, if a cooperatively funded project were successful, the persistent question of how to amass the capital necessary for continued production of high quality might be answered.

The series of programs that came out of this first consortium project was called *Ripples*. And *Ripples* worked. Financed by NIT and eleven state and provincial education agencies, the series has been widely and consistently used during the years since its release in 1970. NIT followed with three more consortium projects, each of which mobilized greater agency support. With *bread & butterflies*, completed in 1974 as the fourth consortium effort, projects were being financed entirely by state and provincial agencies. School television had evolved a self-sustaining method of financing and developing effective programming.

The consortium approach had proven viable as a means for bringing state and provincial agencies together for cooperative production. In 1971 efforts were begun to institutionalize the consortium development process. The Council of Chief State School Officers (CCSSO) in the United States endorsed the concept of cooperative development of school television materials. Support for the creation of an agency to manage the process of cooperative development came from more than a hundred Canadian and American leaders in education and educational broadcasting who met under NIT sponsorship in Atlanta in 1972.

This culminated in the incorporation of the Agency for Instructional Television in the Spring of 1973. The new agency assumed the telecourse acquisition and distribution function of its predecessor, NIT, and embarked on a number of new cooperative development projects.

Brief descriptions of AIT consortium projects may be found in Table 2 on pages 17-19.

The Consortium Development Process

A number of ideas are incorporated in the consortium approach to the development of school television programming. Some of these have to do with the capabilities of television as a medium and its ability to facilitate change. Others are concerned more specifically with the learning materials produced and how they are designed to strengthen instruction. A third set of concepts relates to the lifeblood of the consortium process—cooperation.

Television as an Instrument of Educational Change

Television has many characteristics that, apart from its qualities as a medium of instruction, enhance its ability to bring about educational change.[11] Some of these are obvious. School television can carry new content and teaching practice into the classroom regularly and widely, at a fraction of the cost of other learning materials. The teacher finds it much easier to turn on the television set than to wrestle with the logistics and mechanics of films and projectors. Regular broadcast schedules require advance planning, which can be an obstacle to use. But this planning effort, once made, tends to make television an integral part of a teacher's activities. Television programming, when properly developed, can provide models of a new learning process, both for students and teachers.

Table 2: The AIT Consortium Projects

Project/ Curriculum Area	Consortium Information	Description	Television Station Utilization 1975-76 School Year*
Ripples Early childhood education 1970 Ages 5-7	11 agencies Project cost: $256,000 Consortium contribution: $190,000	*Ripples* is a series of thirty-six 15-minute television programs, supported by three 30-minute teacher programs and a teacher's guide. The materials are designed to help children begin to understand basic ideas about man in relation to himself and his environment. The programs have dramatic themes, featuring children interacting with others and the social/physical environment.	170 U.S. public 23 Canadian 3 U.S. commercial 10 other**
Images & Things Art 1971 Ages 10-13	17 agencies Project cost: $508,000 Consortium contribution: $317,000	*Images & Things* is an art education project. Its integrated set of learning materials includes thirty 20-minute television programs, a teacher's guide, a learning resource kit of slides with an instructor's manual, and three 30-minute teacher information programs. The project is designed to help students achieve clearer understanding of the world of art and its relationship to their own lives.	109 U.S. public 2 U.S. commercial 7 other**
Inside/Out Life-coping I 1973 Ages 8-10	32 agencies Project cost: $779,000 Consortium contribution: $461,000	Helping children develop understandings and skills necessary to cope with social, emotional and physical problems is the goal of *Inside/Out*, a series of thirty 15-minute television programs with a wide range of supporting materials, including a teacher's guide, in-service training materials, administrator and community awareness kits, a 30-minute teacher program, and 15-minute informational program. The television component of *Inside/Out* is built around open-ended dramatic presentations of problems facing children of this age group. The presentations are designed to stimulate classroom discussion to facilitate the development of problem-solving or "coping" skills. *Inside/Out* is the second series in the AIT affective education sequence.	178 U.S. public 2 U.S. commercial 56 Canadian 7 other**

continued on page 18

Table 2 (Continued)

Project/ Curriculum Area	Consortium Information	Description	Television Station Utilization 1975-76 School Year*
bread & butterflies Career development 1974 Ages 9-12	32 agencies Project cost: $604,000 Consortium contribution: $604,000	The fourth consortium project is *bread & butterflies.* Its materials are designed to help children explore the relationship between their lives and the world of work. The project consists of fifteen 15-minute programs and related curriculum and teacher training materials. Open-ended dramatic television presentations are designed to stimulate student discussion and skill development in such areas as positive understanding of self, control over life through decision-making and planning, and personal and interpersonal skills and attitudes necessary to success in school and work.	171 U.S. public 2 U.S. commercial 7 other**
Self Incorporated Life-coping II 1975 Ages 11-13	40 agencies Project cost: $555,000 Consortium contribution: $555,000	*Self Incorporated* is designed to help early adolescents cope with a variety of life problems. Fifteen programs, built around 15-minute dramatic television presentations, deal with such problems and issues as physical changes, peer group pressure, dating readiness, cliques, privacy, and ethnic, racial and religious differences. Materials include, in addition to video programs, a teacher's guide, in-service workshop materials, and a community awareness/information kit. A special family discussion booklet was prepared to help parents discuss programs with their children.	149 U.S. public 2 U.S. commercial 7 Canadian 7 other**
The Heart of Teaching Effective teaching 1976 Adult	14 agencies Project cost: $220,000	*The Heart of Teaching* project is designed to help teachers deal with emotional problems common to their profession. Materials include five 15-minute and one 30-minute film/television presentations, a viewer's guide, a discussion leader's guide and an application handbook.	
MeasureMetric Metric system 1977 Ages 9-12	26 agencies Project cost: $300,000	*MeasureMetric* is designed to help children develop and sharpen skills in measurement and in the use of the metric system. The series consists of twelve 15-minute television/film programs supported by a teacher's guide. Each program is designed as part of a total lesson that involves students in measuring activities before and after viewing.	

continued on page 19

Table 2 (Continued)

Project/ Curriculum Area	Consortium Information	Description	Television Station Utilization 1975-76 School Year*
Trade-offs Economics 1978 Ages 9-13	52 agencies Project cost: $1,165,000	*Trade-offs* is designed to help students think their way through economic problems and reach logical conclusions, to motivate further study of economics, and to heighten teacher interest and performance in economic education. The project is a collaborative effort of AIT, the Joint Council on Economic Education, and the Canadian Foundation for Economic Education. In a departure from prior consortium financing arrangements, costs are shared among participating states and provinces and private sector sources. The project includes fifteen 20-minute programs, a teacher's guide, and a 12-minute informational program.	
ThinkAbout Essential learning skills 1979 Ages 10-12	Project cost: (initial level) $4,245,000	*ThinkAbout* is the initial series in the multi-level Essential Learning Skills Television Project, the most comprehensive consortium project yet undertaken. A full year of instructional design financed by state and provincial agencies, preceded the beginning of experimental production in July 1977, and regular production in March 1978. Exxon Corporation supported initial information activities; the Corporation for Public Broadcasting helped fund experimental production and is partially supporting full production. This project will move the consortium development process to the heart of the school curriculum. The initial level will consist of sixty 15-minute programs and related materials intended to strengthen and develop reasoning and study skills of fifth and sixth graders and improve and extend their mathematics and communication skills.	

*Data from AIT Consortia Series Broadcast Survey, December 12, 1975.

**Cable, closed-circuit, instructional television fixed service.

Television can also respond quite rapidly to social demands on education. AIT's consortium projects are usually just a year to eighteen months in production. These materials can then be widely and rapidly disseminated to classrooms capable of receiving television. The fact that materials are prepared for a variety of delivery systems—film and videocassette as well as for open- and closed-circuit television and instructional television fixed systems (ITFS)—further increase the potential for widespread use. Another factor is the unrestricted rights for reproduction of materials that come with consortium participation. As joint owners of materials, consortium agencies are free to duplicate materials for local use. With the *Self Incorporated* series, for example, all this meant simultaneous and widespread classroom use in forty-two of the sixty states and provinces. Textbook reform or replacement is a slower and more fragmented process.

Consortium Project Materials

All of these attributes are meaningless, however, unless the teacher turns on the television set as part of a well-planned lesson. Thus, the teacher is the heart of the change process. Moreover, the teacher has to keep turning on the set: television instruction must be sustained if it is to be effective.

Recognition of this has shaped the curriculum materials produced through AIT consortia. A typical consortium project has the following features:

1. High Technical, Creative, and Instructional Quality

Good television will absorb children. Poor television turns them off. Turned-off children mean turned-off teachers—and television sets. For this reason, considerable effort and money go into the design, production, and evaluation of all components of the materials package, with major attention to the on-screen event. Good television in itself, of course, is not enough. High production quality must be matched by high instructional quality.

2. Integrated Lessons

There is general agreement that television programs by themselves are not sufficient for sustained learning. Classroom activities must complement television viewing. Thus consortium projects provide for teacher's guides to help structure the total lesson. If the project is to be effective, classroom teachers must clearly understand television and printed materials and be skilled in their use. Consequently, the consortium package includes various in-service materials and activities for teachers, plus informational materials and strategies designed to make education administrators and community leaders, as well as the teachers themselves, aware of the project and its objectives.

3. A Significant Body of Programming

A certain amount of programming must be available if a project is to contribute to the improvement of instruction. While there is no well-researched justification for any particular number of programs in any one series, the rule of thumb for most consortium projects has been a minimum of one lesson per week, over all or half of the school year.

As AIT was being formed, an eventual goal of twenty to thirty such series in all areas of the elementary curriculum was contemplated. It is thought that such a body of material, periodically revised, would make a significant contribution. By the spring of 1977, six series for students and one for teachers were in use. Thus a start has been made toward this goal.

4. Content Reform

The content of a television series must be new enough to facilitate improvement in classroom practice, but not so new as to require substantial curriculum revolution. This was referred to earlier as the "surfing principle" of television in educational reform.

The consortium process incorporates a number of procedures designed to insure that content strikes an appropriate balance.

Cooperation and Involvement

The consortium development process is more than a philosophy and a set of instructional design procedures. It is also a style of work, one that emphasizes cooperation, and the continued involvement of participating state and provincial education agencies. Cooperation is the key to the success of a project from the first step to the last—from the determination of needs to the assimilation of the finished materials.

1. Needs Determination

The identification of a significant and widely shared curriculum need is the cornerstone of every consortium project. The needs determination process involves the agencies with legal responsibility for education in the states and provinces. This process is strengthened by the strong linkages developed by AIT with the Council of Ministers of Education, Canada, and the Council of Chief State School Officers in the United States. In effect, AIT has become a partner in reform, working as a service agency to education.

2. Project Conceptualization

Cooperation continues in the conceptualization of the project. An extended dialogue between AIT and potential consortium agencies results in the development of a prospectus, which enables agencies to commit funds to a project with a good idea of the nature of the materials that will emerge a year or two later.

3. Project Funding

If cooperative needs determination is the cornerstone, cooperative funding is the foundation. Each project must generate its own financial support; it must survive in the marketplace of education. An education agency commits funds to a project knowing that there are other, alternative uses for those limited funds. Thus a decision to join a consortium is an indication of the importance of the project to the consortium agency. (To fund or not to fund is a choice made by persons within the state's or province's existing structure of education; thus, the consortium process puts the decisions to help develop materials and to make them available to schools in the same place. A decision for one is a decision for the other.) The period of time between funding and the delivery of materials generally gives a participating agency ample opportunity for extensive information and utilization activities—activities that promote school and community awareness and acceptance of a project and fuller and wiser use of that project in the classroom.

Cooperative funding provides the capital necessary to produce appealing and effective materials. Spreading costs among a large number of agencies keeps the expenditure of each agency relatively low. The acquisition of materials of high quality at an affordable cost is the consortium benefit most often cited by leaders in the participating education agencies.

4. Project Design, Production, and Evaluation

Consortium agencies participate in the development and evaluation of materials through review of these materials at various stages of completion. At least twice during the production period, AIT brings representatives of the agencies together to look over and discuss the television and printed materials and consider the evaluation data. Consensus results in modification and refinement. On one occasion, an entire project was redesigned to reflect the thinking of participating agencies.

5. Project Assimilation

AIT continues to work with consortium agencies after a series has been delivered, providing assistance with information and utilization activities. It also keeps close watch on the use of materials as a means of evaluating their utility and as a guide to further consortium efforts.

Summary

The consortium development process promotes faster, more effective educational change by fostering the production of widely used instructional television series that meet significant educational needs. The consortium process makes AIT a partner with education agencies in the process of instructional improvement. The materials produced at AIT reflect this philosophy, as do the procedures that have been established to involve participating agencies in all phases of project development.

CHAPTER TWO

The Consortium Development Process: An Overview

Introduction

The use of the materials developed by AIT depends on the degree to which they meet widely shared and significant educational needs. The business of determining needs is in itself complex, combining elements of educational design with the politics of negotiation. Then come the tasks of forming a consortium and of producing materials that meet the requirements of many agencies and still maintain quality and integrity of purpose. All of this is accomplished in a sequence of activities carried out so that the users of the materials are involved in the substantive aspects of development. This sequence—the consortium development process—is more than a set of procedures. It is also (as was observed earlier) a **style** of work reflecting commitment to the ideal of consortium participation.

This brief chapter introduces the consortium development process at AIT—the chain of actions that begins with a need for school television materials and ends with classroom utilization.

A General Model

The first thing to note about how AIT develops school television materials is that the process never seems to work the same way twice. The flexibility of the system, its adaptability to changing circumstances, makes it difficult to say with certainty just what that system is.

But a broad structure and a general approach undergird the procedures in all AIT projects. Figure 1 presents this basic structure and provides a guide to the chapters that describe the process in detail. What is shown here is quite abstract. A project-specific chart of this kind, as will be seen in a later chapter, resembles the structure but does not duplicate it exactly.

There are three general phases of development. The first is Initiation, which encompasses activities to determine needs and to conceptualize a project.

Then comes the Production phase. During this period the conceptualization is translated into designs for television programs and related printed materials, development of the materials takes place, and evaluation activities go forward. As shown, evaluation is formative, with results feeding back into television and print production activity.

In the third phase, Assimilation, AIT assists with the integration of materials into the curricula and activities of consortium agencies. These activities include teacher in-service and orientation (utilization) and community awareness/public information.

Three of the activities on the chart are shown as continuing. One is a complex series of information efforts to keep consortium members informed of progress and assist them with their community awareness/public information work. Another is the utilization activity that strengthens the teacher in-service and information activities of consortium members. The third continuing activity is the formation of the project consortium.

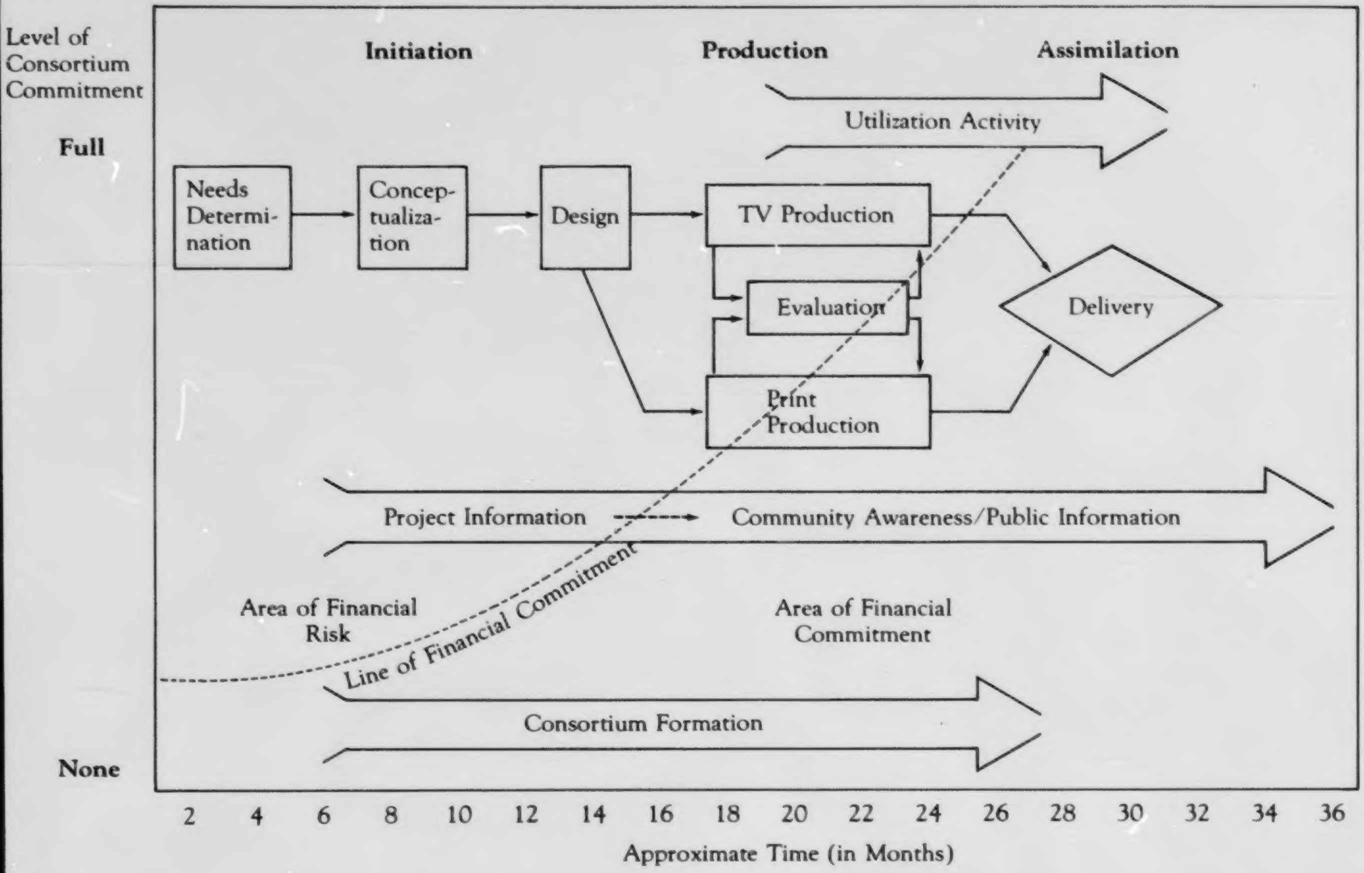
The time scale in the diagram is approximate. The amount of time required will vary greatly, depending on the size of the project, the degree of new conceptualization, the rate at which the consortium is formed, and other factors. Because the needs determination process generally results in the identification of several priority areas at once, and because no two projects will begin simultaneously, more time will elapse between needs determination and conceptualization for one project than for another. *Self Incorporated*, for example, was delivered in September 1975 in response to a need identified two years earlier, while *MeasureMetric*, developed to meet a need identified at the same time, was delivered in January 1977.

The chart also shows how the materials development process is carried forward while a consortium to fund the project is being formed. Again, the relationship demonstrated by the "Line of Financial Commitment" is a general reflection of the process as it has operated to date. It is clear that AIT is at considerable financial risk throughout most of the early phases of project development. Thus far, no consortium has been fully formed, no project budget fully funded, when production of television programs began. Only the existence of a revolving fund created by monies from Exxon Corporation and The Ford Foundation makes these early conceptualization activities possible.

The fact that money is spent before the project is funded stems from the realization by AIT that the mechanisms of consortium development must adjust to the way in which state and provincial agencies function. Some agencies, for example, are able to allocate funds much more quickly than others. (As a result of this, cash flow becomes an important aspect of AIT planning.)

In sum, there are three broad phases of educational develop-

Figure 1: A General Model of the AIT Consortium Development Process



ment—Initiation, Production, and Assimilation. The activities of these phases are carried out simultaneously with the political process of consortium development. The streams of effort are linked by a small AIT staff team strongly committed to school television and to the consortium approach.

In the chapters that follow we will try to show, in some detail, how this process works. In the next chapter the activities of the Initiation phase will be covered: needs determination, project conceptualization, and forming a project consortium. Chapter Four will cover the Production phase—curriculum design, materials production, and evaluation. Chapter Five deals with the two continuing processes of the Assimilation phase—teacher in-service education and information.

CHAPTER THREE

Project Initiation

There are three activities within the project Initiation phase. The first is to determine a curriculum area in which there is a significant and commonly shared need and in which television can play a useful role. The second is to conceptualize a project based on television that will bring the best thinking and practice to bear in meeting this need. The third is to form a consortium to fund the project. This third activity begins early in the Initiation phase and continues into the Production phase.

Needs Determination: Establishing Curriculum Consensus

AIT exists because education agencies believe that there is a need for effective classroom television programming and that school television can play an important role in educational change. These agencies, however, commit themselves—and their funds—to specific projects only. Thus every project must be directed to a need held in common by a group of agencies sufficiently large to fund the project. How does AIT determine what these needs are?

Informal and Formal Procedures

The informal procedures for determining needs consist of staying in constant touch with educators, educational broadcasters, and leaders in professional associations; keeping up with the literature of education and educational broadcasting; and seeking the advice of "friends of AIT." The formal procedures begin when the ideas that have evolved informally are cast in the form of project briefs and discussed by educators and other interested persons at regional meetings called by AIT. The participants at each of these meetings consider the proposed projects, suggest other areas for exploration, vote to establish a recommended list of priorities, and then elect a spokesperson. These several selected representatives are joined by four appointees of the AIT Board of Directors on an Advisory Committee that reviews the results of the regional meetings and makes its own recommendations to the Board. The Board then makes final determination of priorities.

The general procedure is to be repeated periodically. The first round of regional meetings took place in 1973 and 1974, soon after AIT was created. The priorities established then have guided consortium efforts to date.

Occasionally a priority is established outside the formal process. In 1974-75, for example, the AIT staff identified a need and prepared and circulated a project brief to potential consortium agencies. Receiving a favorable response, the staff submitted a formal request for approval to the Board; the request was conceptually related to work going forward to meet "official" priorities. Out of this came *The Heart of Teaching* project, a short affective series designed to help teachers better understand, and thus better cope with, the emotional aspects of teaching.

Philosophical Issues

Two phrases are used at AIT to help describe the process by which promising ideas become projects: **needs determination** and **curriculum consensus.** Each represents an attitude or philosophy.

"Needs determination" is used in place of the more common phrase "needs assessment." AIT does not formally **assess** the needs of education; that is, it does not undertake a complete review of state and provincial curricula. Instead, AIT works with education agencies to determine areas of curriculum where there is significant need for improvement and where school television can play a role. Thus, the AIT list of program priorities is not a comprehensive statement of the needs of education in the U.S. and Canada. It contains, instead, areas of need where there is "curriculum consensus."

At AIT the phrase "curriculum consensus" means agreement among education agencies that a certain area can and should be strengthened through television. Agreement need not be universal. The 1973-74 regional meetings resulted in several lists of priorities that had common elements but were not identical. However, if a need is to become a priority for action, there must be agreement among a good proportion of agencies. Without such consensus, a cooperative project would not be feasible. In practical terms, the proportion is determined by the cost of the proposed project. The higher the cost, the greater the number of agencies that must participate. **Funding therefore serves to validate the existence of a need.**

The concept of consensus limits the degree to which—and the manner in which—AIT is an agency of educational innovation. AIT staff members see themselves as working in partnership with the schools to develop educational materials that fit needs as determined by school officials. The mission is **not** to "intervene" or to impose on education from the outside. Rather, AIT is a partner in reform and improvement initiated by persons within the structures of education.

This non-reformist approach fits well with the consortium funding policy. Funds to support projects come from decision-makers legally responsible for the schools, not from external agencies intent on innovation and reform from outside (such as universities or federal agencies).

A state or provincial agency's participation in the needs determination process tends to lead to "psychological ownership" of the project. When a consortium series goes into use in the schools, it is common to find it presented to the community as a project of the state or province. AIT is often cited only in the credits on the television program or in the teacher's guide. From the perspective of AIT, this is the way it should be.

The Beginning of Utilization

A prime concern from the earliest stages of a project is ultimate utilization. When representatives of education agencies participate in a regional meeting to determine needs, when they react to an informal paper proposing a new or modified need, or when they interact with AIT staff on a project currently underway, the utilization potential of the materials is always being weighed: What would this series of programs really look like? Can our teachers use television-based materials in this area? How can we provide in-service education? What will be the community reaction?

Answers to questions such as these are essential to agency officials trying to decide whether to commit their funds to a project. Thus considerable thinking about the use of the materials takes place before production is completed or even begun. The consortium approach not only makes it possible for agencies to participate in the substantive design; it also enables them to make advance preparation for use. The agencies know what they will get; they can help determine and shape the content; and they can prepare the school and community for the introduction of the materials.

Who Determines the Need?

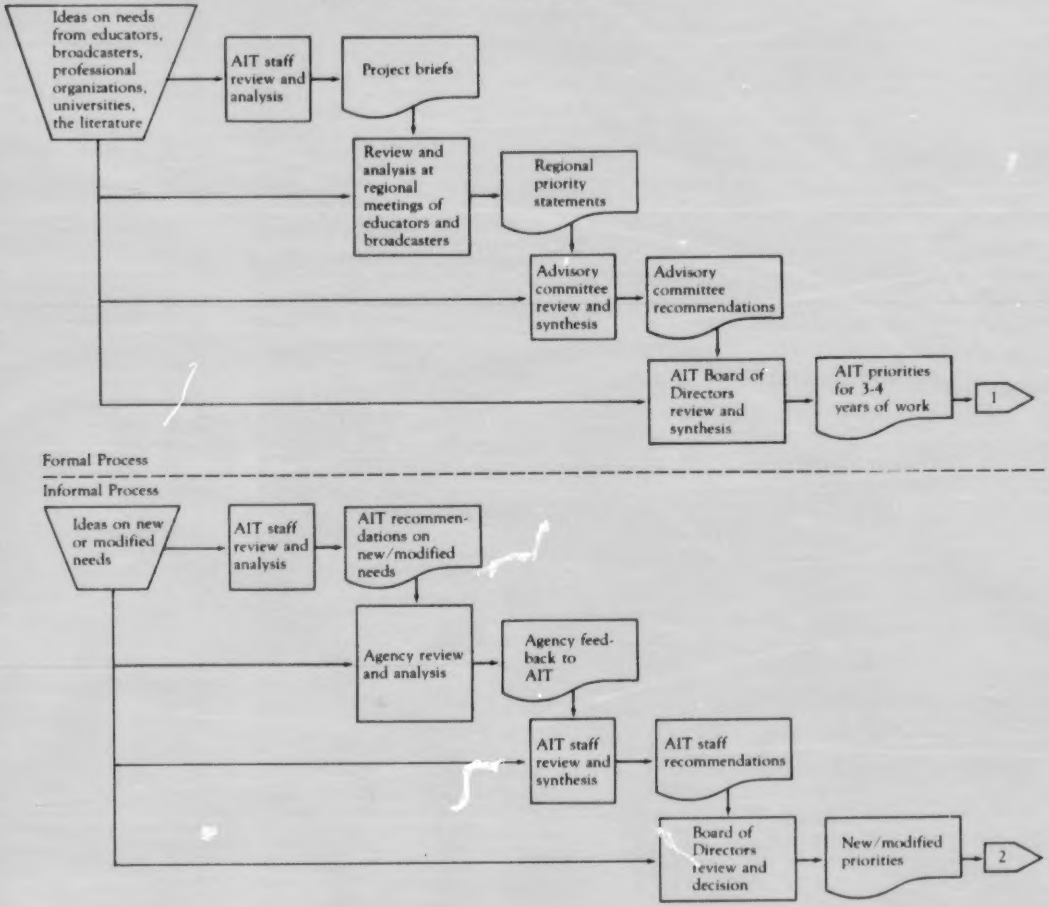
In reviewing the process of project selection, it is important to note again that needs are ultimately determined by administrators in state and provincial education agencies. Legally responsible for education, these administrators are held to represent, and in a sense to synthesize, the needs of children as perceived by parents, teachers, principals, and other interest groups associated with the schools.

A Summary Diagram

The needs determination process is diagrammed in Figure 2. Both the formal and informal processes are shown, as are the steps through which ideas on needs are translated into priorities.

It should be noted that repeated verification of the emerging needs statements occurs in both the formal and informal processes. At

Figure 2: Needs Determination Process


Ideas on needs from educators, broadcasters, professional organizations, universities, the literature
AIT staff review and analysis
Project briefs
Review and analysis at regional meetings of educators and broadcasters
Regional priority statements
Advisory committee review and synthesis
Advisory committee recommendations
AIT Board of Directors review and synthesis
AIT priorities for 3-4 years of work
1
Formal Process
Informal Process
Ideas on new or modified needs
AIT staff review and analysis
AIT recommendations on new/modified needs
Agency review and analysis
Agency feedback to AIT
AIT staff review and synthesis
AIT staff recommendations
Board of Directors review and decision
New/modified priorities
2

each of four points in the formal process an interpretation of needs is made by one group, which passes its findings on to another for review, reanalysis, and further recommendation. The first group is the AIT staff; subsequent groups are drawn from education and broadcasting agencies; and the final decision is made by the AIT Board of Directors, which is composed largely of chief executives of state and provincial education agencies. The members of each group, having central roles in the administration of schools or of instructional television, can review the emerging needs statements in light of their own understanding of the needs of the field.

The informal process is shorter, bypassing formal regional meetings. It does retain verification with education and broadcasting agencies as well as formal review and approval by the Board of Directors.

Through this process AIT seeks to establish curriculum consensus. Partnership in reform is the heart of the effort. This partnership helps to insure the relevance and utility of the projects, and stimulates early thinking about utilization of the materials by the eventual users.

Project Conceptualization

The needs determination process results in a list of curriculum areas such as "career education" and "life-coping skills." Phrases like these must be translated into a project plan that will enable agencies to evaluate the proposed project in light of their own needs and to decide whether or not to participate in the consortium. Conceptualization of a project, therefore, is the important next step.

Functions of Conceptualization

The conceptualization process seeks to answer several key questions:

1. What does the "needs" statement really mean in terms of curriculum structure and course content?
2. What relevant theories and research findings exist, and how can they be applied?
3. What are the characteristics of the intended school audience? In what way are students deficient in the need area? How can they best learn new content?
4. What goals are important and feasible?
5. What can television do in the learning process? What can related printed materials do?

These questions, like much of the AIT planning process, appear to have evolved primarily from experience. They are not based on any particular theory of curriculum or instructional design, but derive from the questions and concerns of user agencies.

Who Conceptualizes?

In developing needs priorities, AIT has contact with subject matter experts in Canada and the United States who command respect in the curriculum area, who are concerned with instructional improvement, and who are familiar with the use of television for instruction. These persons are located in school systems, state education agencies, universities, and professional associations. They form an international pool of talent from which AIT selects a planning team to conceptualize a project. In addition to curriculum experts, planning teams include one or more classroom teachers and several members of the AIT staff.

Planning teams function primarily to determine the content of the proposed materials and to indicate the general role that television might play. Looking forward to the eventual instructional design, they also often include in their plans suggestions for translating concepts into materials.

Planning teams must be chosen with care. It is through the accumulated knowledge and experience of their members—and not through systematic literature search or new field studies—that curriculum and content research are brought to bear on the need area. Consultants on planning teams—and indeed consultants serving in any phase of the consortium development process—must be willing to commit a significant amount of time to the project. Personal qualities such as the ability to work well in groups are almost as important as content mastery. To obtain consultants with both the required expertness and the necessary personal qualities, AIT consciously previews people, testing them in less important roles, then moving them on to larger responsibilities when they have proved themselves.

There is a further dimension to conceptualization. Not only must agreement on course content be achieved, but consensus on instructional methods and approach must also be established. Partnership with a large number of education agencies brings with it considerable diversity of educational philosophy and method. The funding process determines if the conceptualization is compatible with this diversity.

The Chief Consultant

It is essential to have continuity of thinking across the many committees and the several years that go into a project. This function is fulfilled by a principal consultant who is often selected by AIT at the beginning of the conceptualization process.

Although the Chief Consultant is involved in all aspects of the process, his or her primary responsibility is for the content of the materials—for maintaining the integrity of the content as described in the prospectus. Hence, Chief Consultants must have recognized standing within the content area.

The Chief Consultant chairs or participates in planning and design team meetings and drafts committee reports. With the AIT Project Director, he or she supervises the development of scripts, on-screen events, and printed materials, and works with the AIT Director of Evaluation in the design and implementation of evaluation. The Chief

Consultant also often becomes an important spokesman for the project within the educational community.

Like other participants and consultants in the project development process, Chief Consultants are drawn from one of the key groups of experts with which AIT works. Rose Mukerji, Chief Consultant on *Ripples*, comes from the university world, as does Virginia Biggy, who is working with the multi-level essential learning skills project now underway. Alice M. Schwartz, *Images & Things* Chief Consultant, is a university faculty member. *bread & butterflies* had two Chief Consultants, W. Wesley Tennyson, Professor of Educational Psychology at the University of Minnesota, and Gene Bottoms, Director of Programs and Staff Development for the Georgia State Department of Education. Orvis Harrelson, Chief Consultant for both *Inside/Out* and *Self Incorporated*, was Director of Health Services for Tacoma (Washington) Public Schools. Marilyn Suydam from The Ohio State University was Chief Consultant for *MeasureMetric*, and Phillip Saunders of Indiana University is Chief Consultant for *Tradeoffs*, economic education project.

The Chief Consultant brings an important degree of objectivity to the AIT consortium development process. He or she does become, in the course of the project, very much like a staff member. But there are important differences. The Chief Consultant remains independent of the general management processes of the agency and is free to concentrate on the project at hand. In contrast, AIT staff members are engaged in several projects at once. By not being a formal part of the staff, the Chief Consultant is better able to mediate the multiple concerns and viewpoints of consortium members, helping AIT achieve balance among the various needs and interests. Finally, the consultant retains his or her primary professional role. The chief consultancy is a part-time, if demanding, job.

The Conceptualization Process: The Preliminary Report

The planning team usually meets under the chairmanship of the Chief Consultant. Through a series of intensive meetings, the team develops several drafts of an early planning document, called a preliminary report. As these drafts emerge they are sent to education and broadcasting agencies and to subject matter experts for comment and review. Sometimes at this stage AIT will call a special meeting of prospective consortium members.

Responses to the drafts are reviewed and incorporated into successive documents. Frequently there are long telephone conversations on the subject between AIT staff members and potential consortium members. During this period also, the AIT Associate Executive Director for Development and the Chief Consultant travel widely, discussing the proposed project with representatives of state and provincial agencies. These activities are all part of a major effort to involve user agencies.

Preliminary reports differ in nature with the subject matter, and, of course, the thinking of the planning committee. In general, however, they contain the following:

1. A Definition of the Need

Drawing on literature in the field, the report elaborates on and defines the need, usually in terms of the importance of the curriculum area for children. This section can be a critical one, for it must be specific enough so that state or provincial education leaders can decide whether the need, as described, is a real and important one for their agency.

2. Statements of Purpose

Building from the need definition, the report outlines the general goals of the proposed project.

3. Analysis of Research and Practice

The report develops a summary of what is known about the subject matter and about teaching in the curriculum area. This section refers to research and writing in the field, and develops an approach to the teaching/learning process for the subject.

4. Audience Description

The report describes the intended age group—its stage of growth and development as related to learning needs in the curriculum area and other factors relevant to the design of the project.

5. The Role of Television

The report discusses the way in which television can contribute to the teaching/learning process. This analysis is related to the rationale and approach to the subject developed from a review of research and practice.

6. Format and Design Suggestions

The foregoing sections lead to discussion of the design of on-screen and print materials. Typically this section is only suggestive, for design is the function of subsequent and different committees.

The language of the reports is straightforward. There is general agreement that decision-makers in education agencies do not have the time to wade through a dense, scholarly treatment of the subject. Reports often include response forms and prepaid return envelopes to facilitate the review process.

Responses to preliminary reports serve two important functions. First of all, they provide the planning committee and the AIT staff with preliminary information on how well the conceptualization meets the need as perceived in user agencies. The conceptualization can be modified to bring it closer to these perceptions and expectations. Of course, not all responses will be incorporated. Differences of opinion and judgment are inevitable across so many agencies. A major task of the planning team is to establish workable compromises on these differences, while preserving the integrity of the project. Here, as elsewhere in the process, consensus is the goal. AIT staff members participate in these decisions. As they have acquired experience through a number of consortium projects, their role in the balancing process appears to be growing stronger.

Secondly, responses serve to indicate early interest in project participation. It is not uncommon for an agency to make a commitment to a project on the basis of the preliminary report, particularly when that agency has had successful experience with a previous consortium project.

The Prospectus

At a point some four to eight months after the preliminary report has been formally circulated for comment, AIT issues a prospectus for the project. The decision whether and when to issue it is made by AIT's Executive Director, Edwin Cohen, and by Robert Fox, Associate Executive Director for Development.

The prospectus, incorporating comment and review from the field, is actually the last draft of the preliminary report. Often, however, it is prepared by a second planning committee, drawn from the same international pool of talent with a carry-over of the Chief Consultant and perhaps one or two members of the first committee. This second committee is able to approach the development of a final document with relative objectivity, for it has little personal investment in the early work. In addition, new members provide new perspectives.

Contained in the prospectus is the kind of analysis of content found in the preliminary report, but this now has been refined through review and consultation. The prospectus also describes the basic characteristics of the proposed project: length and number of television programs, proposals for print material, evaluation plans. Sometimes the prospectus will include letters of comment from user agencies that reviewed the preliminary report.

The prospectus is the formal "commitment document" for the proposed series. Thus it also includes the project budget and the information necessary for an agency to calculate the cost of consortium participation.

The document is used by officials in state and provincial agencies to obtain support for the project from their colleagues and superiors. It is reviewed by public and private agencies within the states and provinces. It is sent to teachers with requests for comment. Copies will find their way to state legislative committees. While the preliminary report goes to a relatively small group of individuals, the prospectus reaches a wide audience. The process is, in a way, like that of a political campaign. The preliminary report is the advance man, sounding out the territory. The prospectus is the candidate, and it must meet the voters.

Preparing a preliminary report, obtaining responses, revising the conceptualization, and producing a prospectus take, on the average, about one year. A case study tracing the conceptualization process for *Self Incorporated* can be found in Appendix A.

Forming a Project Consortium

Mutual interest is the basis for the formation of consortia for individual projects. But the strength of the interest of any one agency in a given project varies—with the degree to which the project addresses a priority need in the particular state or province, the degree of support for school television within the complex systems of education in which the agency functions, and both the amount of money available and the constraints on the way in which the money may be spent. Thus consortium formation is not automatic. It requires a great deal of planning and coordination, plus a special, helpful interaction between AIT and the prospective member agencies.

The Broad Funding Task

The basic task is to mobilize enough money to make the project possible. AIT's policy of placing the decision to fund in the same agency as the decision to use materials is the basis for project financing. Other sources of funds, however, are important. Exxon Corporation, for example, has contributed significantly, both in its support of initial development through the revolving fund mentioned earlier and its support of expanded utilization components (as in *Inside/Out*).

The Context of Consortium Building

Efforts to develop a project consortium are not begun in a vacuum. Even for the first project, *Ripples*, the decision to try to form a consortium was preceded by discussion of the project among several education agencies. As AIT has matured, this early discussion has become an established part of the process. Through their participation in needs determination activities and in other consortium projects, leaders in education and broadcasting agencies know, in general, what projects are on the horizon; and at the time a project is conceptualized, the AIT staff has some idea of the degree of interest within the state and provincial agencies.

The circulation of a Prospectus provides more specific indications of interest. Some agencies commit formally to a project at the prospectus stage; others give informal assurances of eventual commitment. Some agencies show interest but have funding problems that make participation problematic. Other agencies either do not respond or make it known that they have no interest. Agencies that do commit early in the process tend to form an advocacy group in the attempts to enroll other states and provinces.

1. The Organizational Context

School television is organized in a variety of ways in the states and provinces. In some cases, it is a function of the state education department, which arranges for the broadcasting of programs through contracts with public television stations.[1] In other states and provinces there are educational television agencies or councils, which work in cooperation with the state education agency. These agencies or councils might operate broadcast facilities, or they might contract with television stations. The organization of broadcasting facilities also differs greatly from place to place. Some states and provinces have unified networks, some have loose confederations of independent public broadcast stations, and some have merely a number of independent broadcast facilities. The variety of agencies represented in a consortium is apparent in the list of members of the *Self Incorporated* consortium.

Alaska Department of Education, Division of State Libraries
Department of Education, Province of Alberta
Arkansas Educational Television Commission
British Columbia Provincial Department of Education
California Health Education Television Consortium
Connecticut Consortium for Educational Projects through Television
Florida Department of Education
Hawaii Department of Education
Idaho State Department of Education
Illinois Office of Education and Southern Illinois Instructional Television Association
Indiana State Board of Health
Iowa Drug Abuse Authority/Iowa Educational Broadcasting Network
Kansas State Department of Education
Kentucky Educational Television
Louisiana State Department of Education
Maine Health Education Consortium
Massachusetts Educational Television, Department of Education
Michigan Office of Health and Medical Affairs
Minnesota Department of Education
Mississippi Authority for Educational Television
Missouri State Department of Elementary and Secondary Education
Montana Consortium: *Self Incorporated*
Nebraska Department of Education, ITV Services
Nevada Bureau of Alcohol and Drug Abuse/Nevada State Department of Education
New Hampshire Department of Education
New Jersey Public Broadcasting Authority
New York State Education Department
North Carolina State Department of Education

North Dakota Department of Public Instruction
Ohio Department of Education
Oklahoma State Department of Education
Ontario Educational Communications Authority
Oregon State Department of Education and Oregon Association of Intermediate and County Superintendents
Pennsylvania Department of Education
South Carolina State Department of Education
South Dakota ITV, Division of Elementary and Secondary Education
Tennessee State Department of Education
Texas Education Agency
Utah State Board of Education, Curriculum Division
Virginia State Department of Education
Washington State Instructional Television Consortium
State of Wisconsin, Educational Communications Board
Wyoming State Department of Education

Obviously, the organizational context within which consortium membership must be developed is complex. To operate successfully requires mastery of this complexity and appreciation of the difficulties faced by individual agencies in developing resources for consortium membership. In addition, the leaders of the prospective member agencies must themselves possess patience and tenacity as they work to obtain funding for participation and support for eventual utilization efforts.

2. The Financial Context

Economic considerations are central in every consortium project. From the member agency's point of view, the primary purpose is to obtain programming of high quality at relatively low cost. Therefore, the relationship between cost and quality lies at the heart of agency decisions to participate.

What Consortium Membership Buys

When an education agency rents or leases a telecourse from a supplier, nonprofit or otherwise, it is given the right to use the individual programs for broadcast purposes during a limited period. These materials may be reproduced only under certain conditions.

When an agency invests in a consortium project, however, it receives unlimited use of program materials for instructional purposes in all school systems—local and county, public and private—within the agency's legal jurisdictional and/or normal broadcast area. Agencies have complete freedom to duplicate these materials, or to delegate duplication rights to other agencies within their jurisdiction, though they cannot sell the materials for profit. In sum, consortium agencies are joint owners of the materials.

Participation in a consortium brings with it substantial financial benefits. A comparison of the costs of the materials in the *Self Incor-*

porated project for consortium and non-consortium agencies is provided in Table 3.

Table 3: Comparison of Rights, Benefits, and Use for the *Self Incorporated* Project

Consortium Agencies	**Non-Consortium Agencies**
I. Audiovisual Use	I. Audiovisual Use
A. Film, $90 per program as part of original contract Film, $125 per program *apart* from original contract	A. Film, $180 per program
B. Videocassette, $77 per program	B. Videocassette, $110 per program
C. Unlimited use rights	C. Limited use rights
D. Rights to transfer programs to videotape and/or cassette	D. No duplication rights
II. Television Use	II. Television Use
A. Consortium fee plus cost of videotape	A. Complete course at rates that, over a five-year period, would equal about 115 percent of consortium fee
B. Unlimited use rights including all reduplication rights	B. One week use *only* of each program
C. No restrictions on transmissions within consortium agencies' areas of jurisdiction	C. No network discounts
III. Print Materials	III. Print Materials
A. Teacher's guide, $.75	A. Teacher's guide, $1.50
B. In-service kit, $14.50	B. In-service kit, $14.50
C. Background readings, $15.00	C. Background readings, $15.00
D. Posters (100), $10.00	D. Posters (100), $10.00
E. Family discussion booklets, $.50	E. Family discussion booklets, $.50
F. School/community awareness kit, free	F. School/community awareness kit, free
G. Full duplication rights	G. No duplication rights

What Consortium Membership Costs

The payment structure for consortium participation has two parts. The first is a uniform base fee designed to provide approximately half of the project cost when totaled across the expected number of agencies. The second is a variable fee tied to student enrollment in the state or province. AIT developed the formula over the years after considerable consultation with consortium agencies. (The costs of participation in *Self Incorporated* are shown in Appendix B, together with an example of cost computation for Kentucky.)

To facilitate early decisions to proceed with a project and to help with problems of cash flow, AIT has included in its cost formula an incentive for early commitment. This feature has not always worked well and is under review.

The Commitment

Participating agencies sign a formal agreement that specifies the cost of the subscription and the materials to be supplied. This agreement enables AIT to move ahead with confidence; it facilitates management planning and helps avoid the gaps in staff effort that would occur under less firm arrangements. The commitment of an agency is not only to AIT but also, in effect, to all other agencies in the consortium, each of which is making plans on the assumption that materials will be available for use on a specific date.

The Consortium Building Process

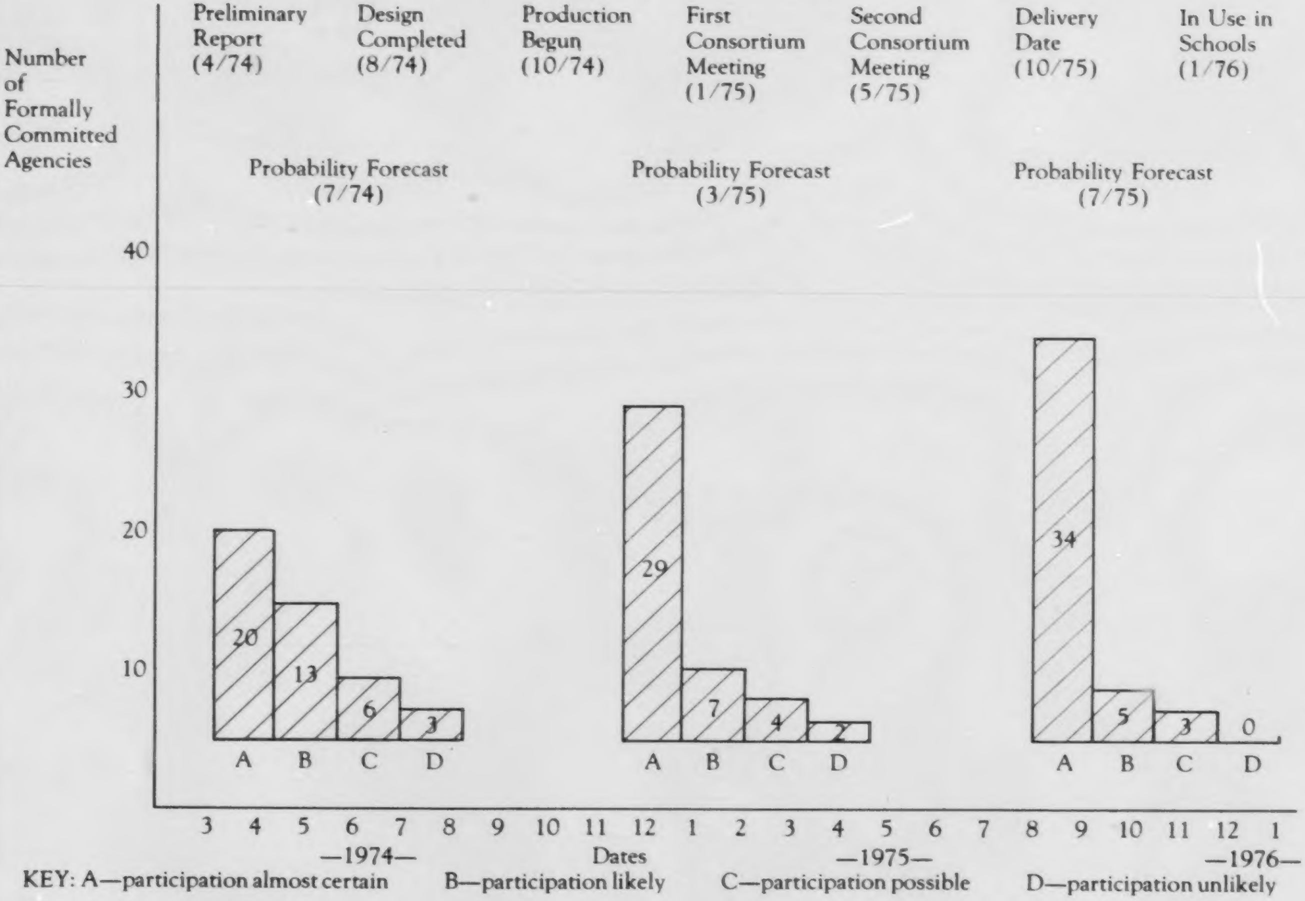
Consortium building is done under a great deal of pressure. This pressure is buffered by the revolving development fund of $300,000, provided initially by Exxon Corporation and The Ford Foundation. The fund enables AIT to commit significant resources to needs determination and project conceptualization. These lead, in turn, to a prospectus. The momentum of consortium building is increased with the circulation of the prospectus and it must be maintained. Generally, the critical decision to continue a project has to be made with only a partial consortium formed. The pressure is intensified whenever, as it sometimes happens, several consortia are in various stages of formation simultaneously. In January 1976, for example, consortia were partially formed for *MeasureMetric*, *The Heart of Teaching*, and a project in economic education (*Trade-offs*), and work to develop a consortium for the project in the essential learning skills was also underway.

1. Forecasting

While the prospectus is being circulated, and before full funding is assured, the AIT staff must decide whether or not to go ahead with the design phase of the project (with its associated costs). As an aid in making this decision, and as a framework for further consortium building efforts, a forecast of consortium membership is developed. Weighing the information received in early stages and testing it against knowledge of the people and organizations in the states and provinces, the AIT staff assigns probabilities of participation. The staff considers a number of factors in its forecast for any one agency: reaction to the prospectus, past consortium participation, the status of funding for school television, the extent to which funds of federal origin may be spent on the project, and the cost of the project in relation to availability of funds. Probabilities are normally assigned at four levels:

A—participation almost certain; B—participation likely; C—participation possible; and D—participation unlikely.

Figure 3: Consortium Formation Patterns (42 Agencies in *Self Incorporated*)



This forecast changes continually as the consortium building process goes forward. It is the basic guide to the decision to go ahead at the various "go/no-go" points in the development process, and especially to the decision to proceed or not proceed with this project.

Figure 3 illustrates how the probability forecast for the forty-two agencies in *Self Incorporated* changed over a period of time. Key dates in the development process are shown as well. As the reader will see, design was begun with the near certainty of participation by twenty agencies. But even as late as the second consortium meeting, it was not at all certain that the consortium would grow to the size that it did in fact become.

2. Consultation in the Consortium Building Process

The one part of the entire consortium building process most difficult to describe adequately is the interaction between AIT and the state and provincial education agencies. It **can** be described in **simple** terms. Bob Fox, Associate Executive Director for Development, visits practically every agency at least once (and many of them several times) to explain the project, to obtain a reading on probabilities for participation, and to help with the development of local funding, if necessary. Considerable correspondence is exchanged. Numerous telephone conversations take place. Leaders in different states talk with one another. Interested persons in various agencies within a state plan together, search for resources, and on occasion even form a small interagency consortium within the state to cover participation costs.

Analogies for the role of AIT in this phase of the process are hard to find. It is not quite the same as selling a new product, although there are elements in common. AIT does not want to **persuade** agencies to join—to be in a "hard sell" position. When Bob Fox goes out on the road, his function is to explain the proposed project carefully and to listen to what agency representatives say about the design, the cost, and their problems in participating. He may offer advice on funding sources; he can arrange payment schedules; he can make presentations of the project to key educators in the state. He doesn't "sell" the product, but he is an advocate for the consortium development process.

Perhaps what is taking place can be best described as a series of extended dialogues, through which AIT and a large number of education agencies seek to achieve common understanding of project goals as they relate to the curriculum structures and needs of the states and provinces. In the process, the goals may be modified. Agencies may, in turn, be motivated to make extra efforts to arrange funding. Together, AIT and agency representatives may work out alternative funding arrangements. It is a process in which every effort is made to enable an agency to participate.

Bob Fox's visits may be the most important element of the process. When he visits a state or province, he must be prepared to discuss the following kinds of issues:

School Television Leadership—Who are the key leaders in the state? Do they understand the project? Are they supportive? Why or why not?

Curriculum Leadership—Who are the key curriculum and content leaders in the state? Do they understand the project? Do they support it? How well does the proposed project fit with the curriculum?

Fiscal Capability—Can funds be made available for the project? How? What federally funded state programs might assist?

Television Distribution Systems—How are television courses delivered to classrooms? How does this pattern affect capability to fund? How does it affect utilization activity?

Administrative Support—Do the structures of education support school television projects? Is there money to sponsor travel to consortium meetings? What must be done to obtain support for the project at the very top?

Infrastructure for Utilization—What resources are available for project implementation? Broadcasting of material? In-service? Community awareness? How can AIT strengthen these efforts if asked?

Commitment to the Consortium Process—What is the past history of participation in consortium projects? How does this history affect the probability of participation in the project at hand?

These are complex issues. Much of the success of the consortium process depends upon Bob Fox's ability to conduct discussions in a state or province at various administrative levels, with deep understanding in each area.

3. Problems in the Consortium Building Process

So far, AIT has been successful in building consortia to fund projects. However, since *Self Incorporated* was delivered there have been a number of developments that may cause future difficulties. These are not all equal in significance, but taken together they indicate that the consortium building process may have to be adjusted.

The first development is perhaps most significant. This is the increasing scope, and therefore cost, of consortium projects. Cost was one of the reasons *MeasureMetric* had to be scaled down. The economic education project, *Trade-offs*, requires significant corporate and foundation funding. Looming over all of this is the proposed multi-level project in the essential learning skills, the first level of which (now in development) will cost about four million dollars.

Support at this level is beyond the television budgets of most state and provincial agencies. These agencies are often funded by legislatures for a one- or two-year period. Uncertainty about the level of budgets makes it difficult, or even impossible, for them to make commitments for annual payments for more than several years. The consortium building process for the essential learning skills has already been modified in recognition of these problems. AIT has asked chief school officers for help in developing commitment to the project's goals and concepts among state/provincial education leaders. In addition, consortium agencies are asked to fund the project in two steps. The first year's payment financed only the instructional design; subsequent payments will make product development possible.

Two other developments may have implications for future consortia. One of these has to do with the usefulness of incentives for early subscription. On a number of occasions, school television leaders have had firm intentions of bringing their states or provinces into a consortium and have made this known in the earliest stages, but have not been able to put funding together until late in the game. To have to pay more to come in officially at that late stage seems to be a penalty for persistence. AIT has tended, therefore, to eliminate the incentive provision in recent projects.

A more serious problem is the constant possibility that an agency may withdraw from a consortium project after signing a participation agreement. This could come about for any of several reasons—a drastic change in the agency's budget, a personnel change, dissatisfaction with project progress. While the agreement is legally binding, to enforce it could mean the alienation of key officials in the state or province that might preclude their participation in future projects.

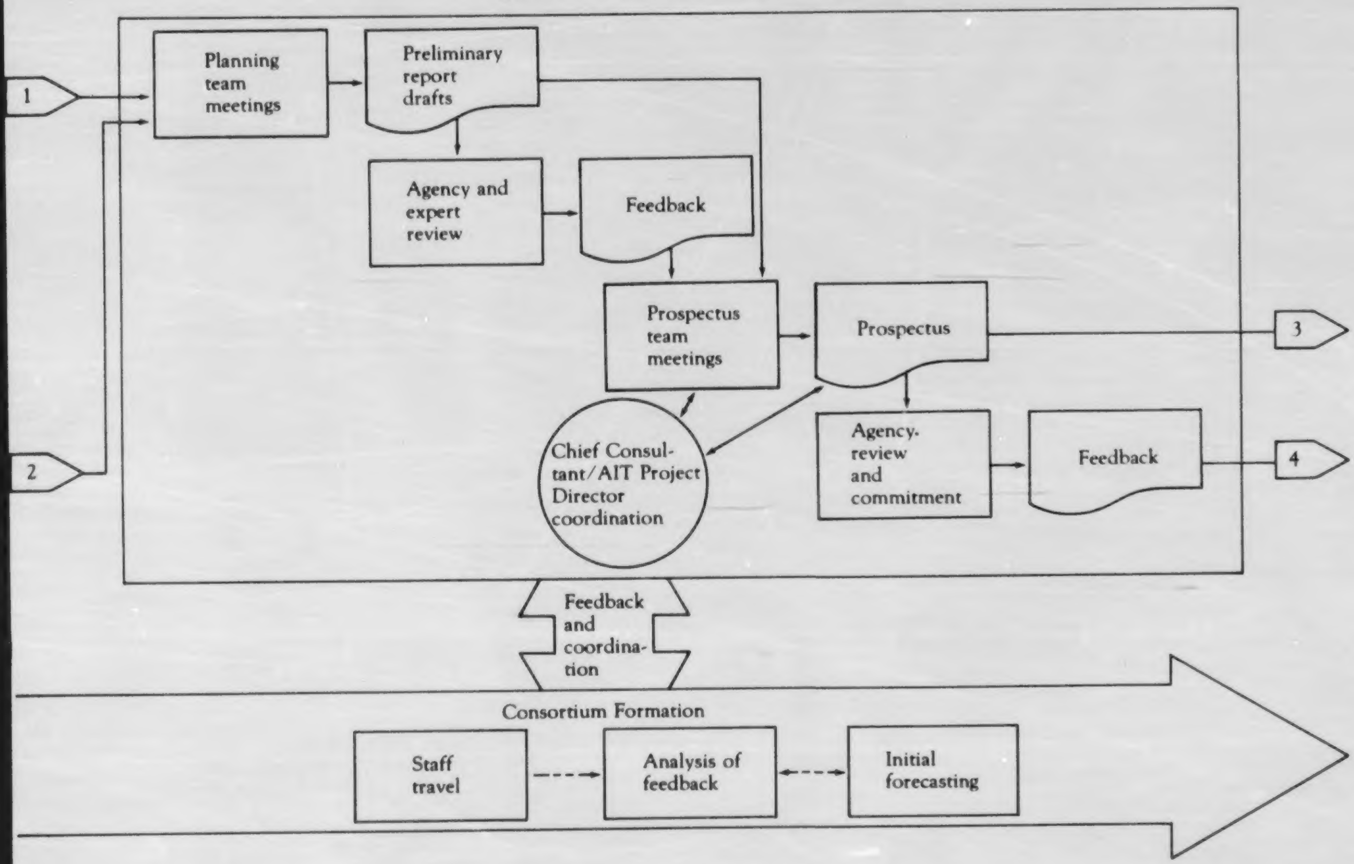
This last problem illustrates how fragile the consortium building process is. Consortia in general remain viable as long as they meet expectations and continue to provide to the agencies benefits that outweigh the cost. Consortia for specific projects are held together by intangibles such as trust, good will, common goals, and peer pressure—not by legal documents. If the intangibles are not there, legal structures will not suffice.

Yet despite these problems, the consortium process is generally healthy. While recognizing the difficulties, particularly those related to costs, educational television leaders in the states and provinces are optimistic about the future of AIT and the consortium development approach.

A Summary Diagram

The conceptualization process is presented in Figure 4. The chart shows the various stages through which a conceptualization is developed. The observer will note how the process continues the structured

Figure 4: Conceptualization Process



consultation with user agencies that characterizes needs determination. Potential consortium members review the proposed project in at least two preliminary forms before receiving the prospectus.

The Planning Committee may meet as many as four times, and AIT staff interaction with potential consortium agencies is extensive. The files for *Inside/Out*, for example, include more than three feet of conceptualization correspondence.

Consortium formation is closely coordinated with conceptualization activities. Efforts to form a project consortium are initiated at about the same time that conceptualization begins. Staff travel, analysis of response from the field, and forecasting are continuous, interrelated activities as consortium formation goes forward.

CHAPTER FOUR

Production

The circulation of a project prospectus marks the end of the conceptualization phase in the development process. In the production phase, the level and number of activities escalate sharply. A curriculum design is developed from the prospectus and the responses to it from potential consortium members. Materials are produced to meet design specifications. Evaluation activities are undertaken, primarily to improve materials in production. These three activities— curriculum design, materials production, evaluation—continue the line of development that began with the identification of a priority need.

As curriculum design, production, and evaluation go forward, so do the efforts to build a project consortium. Associate Executive Director Bob Fox, working with initial indications of interest developed by preliminary reports and the prospectus, maintains the consultation effort that keeps agencies informed of project progress.

Developing a Curriculum Design

The prospectus is the content plan for the project, providing, besides a content description, a curriculum rationale, a statement of broad goals, and a description of the target audience. Although it contains format suggestions for the television and print components, these are merely suggestions. In general, the prospectus leaves much of the project detail to be shaped by the consortium agencies.

The broad function of curriculum design is to translate the general project plan into detailed lesson plans; these lay out the requirements for the television and print components for each lesson. Design is thus midway between conceptualization and materials production. It makes specific the abstractions of the prospectus, providing both guidelines and flexibility for the creative work of the television and print production teams.

The number and complexity of design activities have increased with the scope and complexity of AIT consortium projects. Early design efforts were largely devoted to the television component and a teacher's guide; later projects also include design activities for teacher in-service education and for community awareness programs. This has made careful coordination of design efforts even more important. It has also made necessary greater involvement of the AIT staff in the design process. Increasingly, staff members not only take part in the work of a number of committees, but also perform important linking roles between the various design activities.

Who Designs?

The basic model used in the creation of the Planning Committee is carried over into project design. AIT selects a team of experts to develop instructional design for both television and print components. Continuity with the planning team is provided through the Chief Consultant and, most often, another person with strong content credentials who has served on the Planning Committee. Further continuity and coordination are provided by AIT staff, principally by the Project Director, who also serves as Executive Producer. He shares with the Chief Consultant the responsibility for supervising the translation of design into materials.

The curriculum design team provides a framework for the television materials and teacher's guide. Its work is the basis for that of committees formed to develop other components of the project, such as teacher in-service (utilization) and community awareness. The work of these various groups starts after the curriculum design is completed and television production begun. Each committee is coordinated by the AIT staff member with specific responsibility for that component.

***Self Incorporated* Design Teams**

Curriculum Design Team
Lochie B. Christopher—Kentucky Authority for ETV
Glenn Easley—Clinical Psychologist
Geneva Gay—Association for Supervision and Curriculum Development
Orvis A. Harrelson (Chairman)—Physician-Educator
Robert L. Holland—Ohio State Department of Education
Miriam Karlins—Mental Health Education Consultant
Wallace Ann Wesley—American Medical Association

Curriculum Guide, Principal Writer
Lochie B. Christopher

Utilization Design Team
Bobbie Collum—Mississippi Authority for ETV
John Davies—Oregon State Department of Education
Peter Doran—University of Maine at Farmington

Community Awareness Design Team
Chet Bradley—Wisconsin State Department of Education
Sharon Jasa—Iowa Educational Broadcasting Network
Marlena Scordan—KCTS-TV, University of Washington

The Design Process

The beginning of the curriculum design process presents the final "go/no-go" decision point to AIT. The prospectus is being circulated; comments are coming in. Even the start of the design process requires commitment of a substantial amount of money for consultants and travel. The staff of AIT must evaluate the response to the prospectus and reach a decision: does interest appear sufficiently high in the project (as conceptualized) to warrant further investment? Often, as was the case with *Self Incorporated*, a positive answer is clear and comes quickly. In other cases, the answer is not so clear, and further consultation with potential consortium agencies may be required before design activities are begun. It has yet to happen, but a project would have to be abandoned—with the loss of the money and time invested in needs determination and conceptualization—if a consortium could not be formed.

Design teams meet in intensive, marathon sessions to develop lessons that reflect the intent of the prospectus. The prospectus was developed as a guide, however, and not as a rigid blueprint. The design team is essentially a new group (with its own ideas and special areas of experience and skill); furthermore, it must deal directly with the teaching/learning process, taking into account the feasibility of proposed materials. Thus, changes in emphasis and interpretation occur. The Chief Consultant and the AIT Project Director help keep the design team faithful to the broad, basic prospectus requirements through participation in meetings and review of products.

In general, participation of committed and potential consortium members tends to diminish during the design phase; control by the Chief Consultant and the AIT staff increases. Lesson design is both more technical and more detailed than conceptualization. The kind of joint planning by a "committee of the whole" that takes place during conceptualization is less practicable. Completed curriculum designs are shared with consortium agencies, but direct response is not solicited as intensively as in the conceptualization.

Formal linkage between the curriculum design team and production agencies is normally accomplished by a series of meetings toward the end of the design process. (Sometimes production agency staff members will have participated as observers in early design meetings.) Writers and producers meet with the design team to go over the proposed lessons. Questions are raised and issues clarified. These meetings mark yet another formal change of responsibility. The design team, which accepted the prospectus from the Planning Committee, passes the baton, now in the form of detailed lesson plans, to the producing agencies. Again, continuity is provided by the Chief Consultant and the AIT Project Director.

1. Variety in Designs—and the Design Process

A simple description of the basic design process fails to do justice to the many important variations that occur, both in the designs themselves and in the process through which they are developed. Like all consortium activities, design procedures and products are often modified to better meet the demands of each project. The texture of the design process can perhaps be best appreciated through the examples presented in Appendix C. The *bread & butterflies* example presents a relatively complex design; the one for *Self Incorporated* takes a simpler approach.

2. Issues in the Design Process

It is significant to note that AIT has no formally accepted instructional design theory. Such theories exist, just as theories exist in the various content areas for which projects are developed. As with conceptualization, AIT relies on the wisdom of team members, who are expected to apply what they know about the design process to the task at hand. This helps explain some of the differences observed in the nature of the designs for different projects.

It would be useful to be able to trace the effectiveness of alternative design formats in guiding television production. AIT has worked with a variety of approaches. Some designs are quite detailed; others are not. So far, there is no clear evidence to support the efficacy of one approach over another.

AIT's achievement may lie not so much in the actual designs themselves, but in how well the design team and, perhaps most importantly, the Chief Consultant and the AIT Project Director are able to communicate the intent of a design to producers, and to control the production process—to keep it on track, faithful to the intent of the prospectus and the design. Centralized control of design and production processes appears to be a major reason for the quality of the projects.

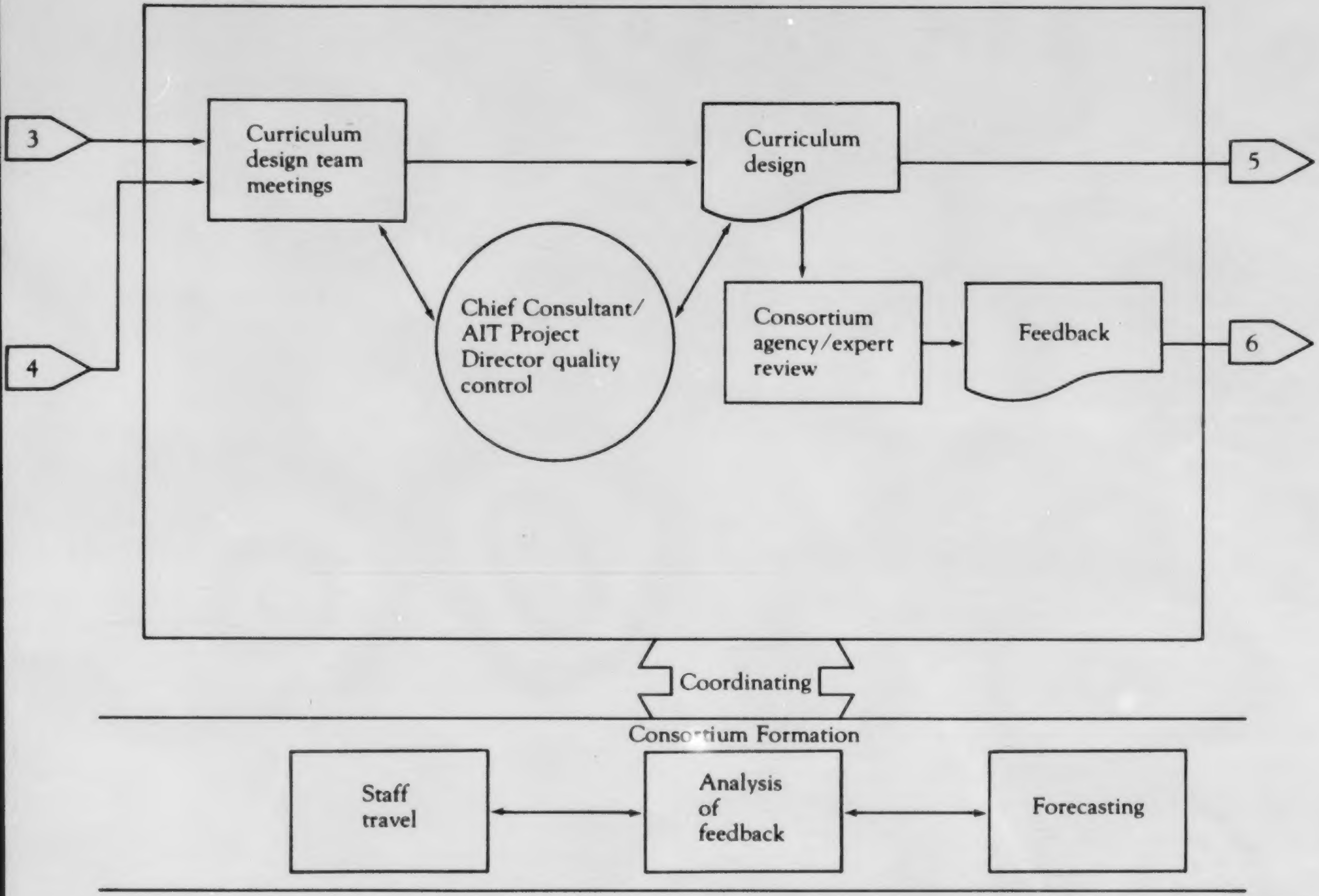
The design process is the point where education and broadcasting meet. Needs have been determined in the context of education, by education agencies. Conceptualization and design also have been the task of educators. Their specifications for television programs, however, are passed to persons who consider themselves creative communicators first and educators second.

Bringing these two groups together in a productive enterprise has been, it is generally believed, a major factor in the success of the **Sesame Street** and **The Electric Company** series of the Children's Television Workshop.[1] It is also an important element in the AIT consortium development process.

A Summary Diagram

Figure 5 continues the graphic representation of the consortium development process with details on project design. Notice that consultation with potential consortium members is reduced in scope, occurring only with the circulation of the final curriculum design. Note

Figure 5: Curriculum Design Process


3
4
Curriculum design team meetings
Curriculum design
5
Chief Consultant/ AIT Project Director quality control
Consortium agency/expert review
Feedback
6
Coordinating
Consortium Formation
Staff travel
Analysis of feedback
Forecasting

also the controlling roles played by the Chief Consultant and AIT staff.

Materials Production

AIT Project Director Larry Walcoff carries business cards that identify him as AIT's Vice-President for Fear. The intent is humorous, but the joke reflects an important truth. The Project Director is responsible for the demanding activities of the production phase of the consortium development process. Project design is a significant and energy-consuming activity, but compared with materials production, it is rather like the calm before the storm. Materials production includes five major processes: program production, program evaluation, print production, print evaluation, and utilization planning.

Production is decentralized: for a single project program materials are produced in as many as five different locations. Production schedules must be established and maintained, and carefully coordinated with evaluation activities. Close consultation with consortium members is reestablished through periodic consortium meetings. Response from users must be constantly evaluated, negotiated, and incorporated into the production process. Numerous important details must be attended to, from negotiating production agreements to achieving geographic and ethnic balance across the series of programs.

Underlying the intense activity of production is the continuous and complex business of forming a consortium—of obtaining the funding that makes the activity possible. Production always seems to begin with a partially formed consortium and faith, based on the probability analysis, that the full consortium will be formed and the budget funded. Careful and continual cash flow planning is necessary to meet financial obligations to writers and production agencies.

Looming over the entire process is a delivery date worked out with consortium members and tied to the inflexible time schedules of the schools. In the seven consortium projects completed as of the spring of 1977, this date has had to be pushed back only once. (This unusual case is discussed in detail later in this chapter.)

Thus the materials production process is, in many respects, a fearsome one. The record indicates that it has worked well. That it works at all is due to careful planning, experienced personnel, and close cooperation between the Project Director/Executive Producer, Chief Consultant, AIT staff, production agency teams, writing teams, various consultants, and representatives of consortium agencies. Cooperation is the key, the heart of the process. The diverse participants share a common goal—the production of materials of high quality that meet user needs—and this, in turn, is the key to cooperation.

Choosing Production Agencies

Program production is carried out under contract with AIT by producing agencies in the United States and Canada. There are three major advantages to working this way rather than with a centralized, in-house production unit.

One of these is financial. Decentralized contracting eliminates the high costs of "down time" for personnel, equipment, and facilities that are associated with in-house production.

A second advantage is operational. By using several outside agencies, AIT can divide the work and thus achieve simultaneous production at a number of sites. This makes possible a large volume of production in a relatively short time. Under this system also, a number of programs become available for formative evaluation early in the production period.

The third advantage is diversity. Multiple sites make it easier to build various geographic and ethnic factors into programs, and multiple writing and production teams bring differing talents and approaches to bear in the creative process. Using a number of production agencies also produces healthy competition among them, which serves to intensify effort.

The capabilities of the production agencies are, of course, critical to the achievement of quality. Five criteria are used in choosing producers:

1. **Commitment to School Television:** There must be evidence that the leadership of the production agency has more than a pecuniary interest in producing for AIT. A strong commitment to enhancing the effectiveness of television in the educational process is essential. Evidence of this commitment is found in the production record of the agency and in the willingness of the staff to be creative within the boundaries of an educational design.

2. **Talent:** Programs are made by people, not equipment. As Larry Walcoff points out, equipment and studios can be rented; creative people are not as easily acquired. Production contracts between AIT and television agencies contain a clause calling for reconsideration and renegotiation of the agreement in the event that there are production personnel changes.

3. **Experience:** The best way to judge creative and technical talent is to look at past efforts, both of the agency and of the people who would carry out the work.

4. **Access to Children:** The designs for AIT projects almost always call for the use of children as actors and the use of schools for settings. The projects also require the use of students for evaluation purposes. Production agencies must have access to children and schools.

5. **Geographical Location:** Generally it is desirable to have as

much diversity of setting (urban/rural, north/south, east/west, Canada/U.S.) as possible within one project. Thus geographical location becomes a further criterion in the selection of production agencies.

By this method, AIT has identified a core of capable production teams, and there has been continued association between AIT and many of its chosen production people. The result is an "extended family" that works together to produce school television projects through the consortium process. The fact that production agency selection takes place each time a project is developed, however, serves to keep this relationship one of mutual respect and independence. Neither AIT nor individual production agencies rely exclusively on each other to stay in business. This independence enhances the creative role of the producers and keeps ultimate control of the projects with AIT.

Production Agreements

We have seen that the decision to develop a prospectus and the initiation of design activities represent turning points in the consortium development process. A third turning point, with fiscal implications far greater than those of the previous two, comes when contracts are let with production agencies. Direct production costs for television components of the materials are by far the largest single expenditure in a consortium project; they represent close to half of the total project budget. Production contracts, once signed, are binding documents. Thus the decision to enter into these agreements is the point of no return in the project development cycle.

Production contracts put considerable emphasis on meeting production deadlines. But they are, in turn, flexible in the matter of additional payment to the producers when it is needed to achieve quality—for example, for supplemental travel to get the right location, or for modifications found necessary through evaluation or consortium review. The contracts delineate mechanisms for control and supervision, and the points in the production process where AIT approval is required. In them also, AIT obligates itself to provide design specifications and consultancy services.

Not directly reflected in the contract language is the key feature of the process: non-competitive contracting. Competitive contracting would require the agency to evaluate the proposals and capabilities of all comers, and select agencies that provide low bids and show evidence of capability. Instead, AIT identifies the best qualified agencies, using the criteria outlined above, and works out agreements. All agencies receive the same fee per program produced.

Freedom from competitive contracting enables AIT to move quickly in choosing agencies that can do the best work. It also saves the large amounts of time and money that a competitive process requires.

The Production Process: Programs

The production contract provides the basis for translating educational designs into programs. Educators set the specifications; producers apply their talents to develop programming of high technical and artistic quality. The success of this partnership has been a major factor in the quality, and achievement, of AIT projects. As Barbara Cole, ETV Coordinator for Illinois, puts it: "We turned a major corner in school television with the consortium projects. We no longer have to apologize to our teachers for the quality of our programming. The quality is there, and is recognized. We can now concentrate more of our energy on working with teachers to achieve the kind of utilization that the quality of the programming deserves."[2]

1. Key Personnel

At the heart of the creative process are the writer and the producer. In some agencies these roles are filled by the same person; in others, one or more writers will work with a producer. Under the overall supervision of the project's Chief Consultant and the AIT Project Director, the writers and producers take the design team recommendations, add their own ideas and insights, and come up first with a scenario and eventually with a finished program.

2. Developing Scenarios and Scripts: Preformative Evaluation in Action

Before production, writers and producers, with AIT support, set out to test program ideas and themes. These activities are considered to be "preformative evaluation."

There are a number of ways in which writers approach this task. Often they go to students, teachers, and content specialists for their responses. This consultation process extends beyond the development of the scenario and on into scripting and filming. Mary Williamson, a teacher at Hanley Junior High School in University City, Missouri, has described how she and her students became involved in the development of a number of programs for *Self Incorporated.* As a local consultant to writer John Allman of KETC-TV, St. Louis, one of the production agencies for the project, she had to organize the comments of students on the basic themes set forth in the instructional design. She describes her work for the program on "Failure and Disappointment":

> I began work on the "Failure and Disappointment" film in late November by distributing a question sheet to about 200 students. There was a fascinating variety of answers to the questions. Many students covered up real fears by giving extremely conventional answers at first but they opened up much more on the essay question. Even though I asked my students to begin with the failure and tell what happened afterwards, many began with the hope of victory and left the failure for the punch line "Casey at the Bat" style. One of my students wrote very little in class and asked me if she could finish the assignment at home. She stopped me in the hall the next day and insisted that I read her paper "right now." It was the cheerleading fail-

> ure story which became the germinal idea for the show. Although the final script has developed quite differently from Cheryl's story, the elements are all there: the crushing blow, the parent's support, the boyfriend, blaming the teachers for their unfairness, etc.
>
> Cheryl was awarded an honorarium for her idea and she and two other girls became consultants for John as he wrote the script. On four occasions I arranged for meetings between John and his three young consultants: going over details of cheerleading tryouts, actual cheers, feelings, etc. I also arranged for John to attend a cheerleading tryout for the Hanley squad.
>
> Tryouts for the leading role brought more disappointment for Cheryl when she was not chosen to play her part, but when she made the high school cheering squad a week later we all felt better.
>
> John filmed the show at another junior high school, so after the script was written my next contact with the show was a rough-cut viewing in early July. The script was simple, clear and more than a bit sentimental, so I chose a "tough" bunch from summer school to view the rough-cut. I thought they might be very critical of a girl's program, which it unabashedly was. But they were fascinated. They immediately drew parallels between cheerleading and the feelings they had gone through after being cut from football or basketball squads and they loved the shots of the tryout, an event which boys are forbidden to watch.[3]

This process helps the writer/producer develop a treatment that will seem real to children. It is also a useful way of testing potential themes and production techniques with the eventual audience.

The writer may get strong ideas from this process, but his or her creative talents must also come to bear; occasionally there is conflict between the need to be creative and the need to be educational. An example of this can be found in the files on *Self Incorporated.* (See Appendix D.)

The second step in the production process is the development of scripts from scenarios approved by the Chief Consultant and Project Director. Local evaluation consultants work with the writer to have the script reviewed by children and teachers. These consultants are hired by AIT. Thus they are fiscally independent of, yet intellectually responsible to, the writer/producer. Small groups of students read the script and discuss it with the evaluation consultant. The consultant then writes narrative reports that provide insights into how children view the plot, the characterizations, the language used, the problems, and how the problems affect the characters. The effect of this is, again, to keep the development of the program on track with the audience.

Script review marks the beginning of increased consortium participation in the substantive aspects of project development. In most projects, scripts of some of the programs are reviewed by the member agencies at early consortium meetings.

Script review can lead to important changes in individual programs. Of particular concern to consortium agencies are issues of language, relationships, and physical and geographic settings. Agency representatives are constantly alert for script elements that may hinder program utilization. Changes proposed by agencies are considered by the Chief Consultant and the Project Director. Where differences of opinion on proposed changes exist among agencies, the Chief Consultant becomes the mediator, and also the guardian of the project's integrity.

As the production phase proceeds and as additional scripts are produced, consortium agencies continue the review process, either by mail (with a deadline for return of comments) or at subsequent consortium meetings. Final approval of scripts comes from the Chief Consultant and the AIT Project Director.

3. Filming and Formative Evaluation

The basic review and approval procedures established for the script continue with the film product. Consortium agencies review early "rough-cuts" of films at their meetings. The Chief Consultant and the Project Director retain control of the process, approving the film product at various stages—or deciding that there should be changes.

Early programs in a series are tested with children in classrooms. This testing is done under the supervision of the AIT Evaluation Director. Major revision can result from this process, which is described in detail beginning on page 67.

The project budgets give evidence of the commitment to formative evaluation of programs. Funds are set aside in advance to reimburse production agencies for the costs of revising programs. The AIT Project Director negotiates the required revision with the production agencies. These negotiations establish both the nature of the changes and their costs.

Throughout the development of a program, the production agency is responsible to AIT for quality—quality in the creative interpretation of the instructional design and in the technical aspects of the film. When a program has received final approval from the Chief Consultant and the Project Director, original film materials are delivered to AIT, which then assumes responsibility for the technical quality of duplication and for distributing the materials to the consortium agencies.

The Production Process: Print

A central feature of consortium projects is the development of integrated lessons that comprise both the television program and related print materials. Over a period of time, print components of projects have become increasingly comprehensive and complex. These components include, in addition to the teacher's guide, materials designed and produced for in-service education and school/community awareness activities.

Detailed planning of print materials begins after the overall curriculum design has been completed. The expert committee mechanism is used here as well. Special design teams for the various materials meet and work under the coordination of the AIT staff.

The print design process is complicated by the need to deliver the materials—particularly the teacher's guide and the in-service materials—in advance of program delivery. Ideally, print designers would work from completed programs. The realities of scheduling are such, however, that sometimes only earlier programs are available to the print teams, and the materials must be developed in part from the program product and in part from scenarios and scripts. This process adds a further coordination burden. Changes occurring between the script and the final versions of the programs must be made also in the final versions of the print materials.

The consortium agencies review the print materials in various stages of completion. In addition, most print teams include a consortium agency representative. Member agencies also make substantive contributions, especially to the design of the teacher's guide, during the project's design phase and even as early as the conceptualization phase. Print materials are tested in classrooms and in-service settings as part of the development process.

The teacher's guide is a major cost component of a project. Thus the size, scope, and price of guides are of prime concern to the member agencies. A consortium agency's expenditures for print materials and for in-service and community awareness activities will often exceed its consortium participation costs. These expenditures themselves are a confirmation of the importance of the project to the agency.

The experiences of the *Self Incorporated* project provide an example of the kind of planning that goes into the development of a teacher's guide.

The guide for the earlier series in emotional health education, *Inside/Out*, had been quite complete, with two pages devoted to each lesson and separate sections providing a synopsis of the program, follow-up discussion questions, a statement of the purpose of the program, a special note on the relationship of the lesson to various curriculum areas and a list of suggested follow-up classroom activities. It was extensively illustrated with photographs, and included an introductory phonograph record by puppeteer Shari Lewis. In every respect the *Inside/Out* guide was developed as a model aid for teachers. Because the preparation and distribution of it were financed by an Exxon Corporation grant, it became possible in this project to probe fully the nature, function and realities of a teacher's guide.

As planning for *Self Incorporated* progressed, concern for the cost of the guide for this new series was expressed by AIT staff and potential consortium members. The basic question was, "Is a guide comparable in size to the *Inside/Out* guide necessary?" Opinion was divided among AIT staff and the Chief Consultant. This led to an evaluation of the utilization of the *Inside/Out* guide as a basis for format decisions for *Self Incorporated.*

A survey of teachers using *Inside/Out* indicated that a less complex and cheaper guide would be sufficient. The survey results were discussed at a consortium meeting. A final step in this evaluation process was to present alternative guide formats to a panel of teachers for review and comment. The end result was a more compact guide, available at lower cost.

This example also illustrates further the formative evaluation process. A potential problem (cost and size of teacher's guides) arose. User opinions (those of teachers) were assessed. Evaluation results were discussed with consortium members. Finally, data from all sources were reviewed and a decision on format was made.

1. The Materials

Teacher's Guides

The teacher's guide is the principal means to the fullest and best use of the on-screen event in the classroom. It helps the teacher by providing a range of resources. Teacher's guides vary in format. In the affective series they include, at a minimum, a summary of the television program, discussion questions, and suggestions for classroom activities. (An example is provided in Appendix E.) Additional features may include a project rationale, a discussion of the curriculum area (based on the project prospectus), and statements on goals and objectives. Additional audiovisual aids have occasionally been produced as supplements for classroom activity. For example, a separate kit of 35mm slides was provided for *Images & Things.*

Utilization Materials

Preparing teachers to use the programs well is a major concern of the member agencies—and a critical factor in achieving the desired educational change. Beginning with *Inside/Out* (and with initial assistance from Exxon Corporation) AIT has responded to this concern by providing in-service workshop manuals and other materials. These manuals contain resources to help in-service leaders plan and carry out workshops of varying lengths as part of the process of introducing a new series in the schools. Included are questionnaires for assessing the knowledge and skill of teachers in areas important to successful use of the project, general workshop planning guides and suggestions, materials for announcing and publicizing in-service activities, and specific, detailed plans (schedules, discussion topics, supplementary reading materials) for workshops lasting several hours or several days.

School/Community Awareness Materials

Community awareness of a new consortium project is often an important factor in its success. Thus, the production of awareness materials for national use by AIT and for local use by the member agencies. These materials help the agencies make full and accurate information on a project widely available and so build school and community understanding, acceptance, and support.

Several consortium projects have included an informational film on the series and its objectives. In addition, some consortium agencies have produced their own informational television programs for introducing a new series. (Some of these materials are described in Chapter Five.) "Community awareness" kits are developed for each project. These contain ideas for project promotion, basic project information, and a variety of press releases designed for use by local agencies. Included also are guidelines for arranging community meetings. In some projects publicity posters also are developed and distributed in large quantity.

An additional feature of the awareness materials for *Self Incorporated* is a *Parent Discussion Booklet*, designed to familiarize parents with program themes and to assist them in discussing the programs with their children.

As with guides and other utilization materials for consortium series, awareness products were pioneered with the help of Exxon funds.

2. Materials Stimulated by Consortium Projects

The widespread acceptance of recent consortium projects has stimulated the production of related educational materials. Both *Inside/Out* and *bread & butterflies* have been followed by paperback books (with accompanying adult guides). *Stories from Inside/Out* (Bantam Books, 1975) presents short story adaptations of selected programs. *My bread & butterflies Career Book* (Houghton Mifflin, 1976) is a student activity book in career development, designed to be used with or without the television programs. Both books have been issued by commercial publishers. AIT will use any royalties for further development of consortium projects.

The amount of royalties probably will be small. Yet, more than twenty-five thousand of the *Inside/Out* books were made available for use in both schools and homes. The *bread & butterflies* activity book was released in July 1976 for use in schools. There will be more such ventures if, in the opinion of the AIT staff, they support the educational purposes of the project and receive consortium approval.

Production Scheduling and Budgeting

Materials production involves many scheduling and budgeting problems. Already mentioned are the problems of coordinating program production with evaluation and the design of print materials. The work of each production agency must also be planned to insure delivery with sufficient time for duplication. Seemingly small but difficult problems must be dealt with (for example, what to do if required revision means returning to winter shooting locations when the snow is gone). Meetings of producers and of consortium agency representatives must be worked into the schedule. A page from Project Director Larry Walcoff's Planning Notebook for *Self Incorporated* (see Appendix F) gives the broad picture of the coordination task.

Maintaining quality across schedules like these requires attention to detail, awareness of deadlines, and timely decision-making. The Chief Consultant and the AIT Project Director must stay abreast of progress at each producing agency and be ready to make decisions at various stages of product development. The key to this is the working relationship between producers and supervisors; and important to this relationship has been the decision to place final responsibility for quality with the Project Director and for content with the Chief Consultant, and to give each full authority to accept, reject, or negotiate for revisions.

Work is not the only commodity that must be coordinated; money must be scheduled as well. While agreements with consultants and production agencies specify payment on delivery, funding arrangements with consortium agencies must be more flexible. Continuous cash flow planning is required to match income with obligations falling due; money for a particular project does not always come in at the same rate that it goes out. Because of local requirements, some member agencies may have to delay final payments until as much as a year after delivery.

Consortium Meetings

Two or three times during the production of a series, representatives of the consortium agencies gather to review the project. The importance of these meetings cannot be overstated. AIT's commitment to user involvement in substantive aspects of project development has been implemented in early stages through relatively "cool" processes—interaction on the prospectus and mail and telephone discussions of the broad intent and structure of the project. In consortium meetings, agency representatives see program and print products in various stages of completion. They are asked to respond. They interact with colleagues in other states and provinces in telling the AIT staff what they like, what they don't like, and what they hope to see done. The consortium meeting is a relatively "hot" process.

1. Who Attends?

Thus far educational agencies have been discussed as if they were people. This is convenient for some analyses, but can be misleading in discussing such features of the cooperative development process as consortium meetings.

It should be remembered that each state and province has its unique organizational arrangement for school television. Primary responsibility often rests with a branch of a state or provincial education agency; sometimes it lies with an independent educational broadcasting agency. Sometimes the participating agency is not the state education agency itself but an organization with a mission akin to the purposes of the project (a health agency for *Inside/Out*, for example, or a vocational rehabilitation agency for *bread & butterflies*).

Diversity among those attending the consortium meetings is further increased by functional specialization and by level of responsibility. There will be educational broadcasters there (they tend to form a recurrent group at meetings for different projects); there will also be curriculum specialists and in-service education experts, assistant state superintendents for instruction and classroom teachers with special curriculum or television responsibilities. In short, those who attend represent many different, and occasionally conflicting, perspectives. They are, however, united by a common commitment to the project (although there may also be representatives from agencies that have not yet made the decision to come aboard).

Joining the agency representatives will be members of various design teams, the writers and producers, the chief consultants, and members of the AIT staff.

2. The Agenda

The consortium meeting is a major review point in the project. It gives the project staff a chance to listen to the needs and opinions of the user agencies, and it gives the agency representatives a chance to make sure that, as much as possible, the project meets their expectations. Such meetings provide another beneficial, though incidental function: they serve as forums for the exchange of information on instructional television in general among state and provincial agencies.

PROCESS OBJECTIVES FOR THE
SELF INCORPORATED
CONSORTIUM MEETING IN LOUISVILLE, KENTUCKY
JANUARY 13-16, 1975

- **Present information about the status of the project**
- **Review scripts in early stages of development and help plan final two programs for the series**
- **Design approaches for in-service activities for the project**
- **Review a sample lesson from the teacher's guide prototype and help create possible designs for the teacher's guide**
- **Review plans for the evaluation and obtain participation from consortium members in the evaluation**
- **Review plans for information dissemination activities and obtain participation from consortium members in the information dissemination activities**
- **Create a dialogue among participants for the purpose of sharing information about project utilization and implementation activities**

Meetings generally last two to three days. They consist of general presentations supplemented by intensive small group sessions on specific aspects of the project—scripts and programs, evaluation plans, procedures, and print components. Early consortium meetings tend to focus on programs; later meetings give more attention to print components and to utilization.

3. The Process

The dynamics of a consortium meeting are determined by the issues and the membership. No matter what, not everyone will be pleased. Individuals new to the process, or to the project, may have to be brought up to date, or educated on key issues. There is discussion, disagreement, controversy.

Underlying the process, and holding it together, is the commitment of the AIT staff, the Chief Consultant, the design team members, and the production agencies to develop products and activities that meet consensus needs, maintain quality, and stay true to the purpose of the prospectus. Sorting out different expectations and achieving consensus requires a great deal of listening and the capacity and willingness to make on-the-spot decisions and changes.

Consortium meetings **do** change projects. Scripts and programs **are** revised on consortium advice. The changes often involve the treatment of a teaching point or a sensitive issue (such as the physical changes of early adolescence). On occasion, the consortium has mandated the complete revision of one or more programs. (At *Self Incorporated* meetings, the consortium chose the themes for two programs purposely left open by the design team.) In planning the print, utilization, and community awareness components, consortium meetings are primary sources of ideas.

With goodwill and common goals, the consortium process works. Interviews with representatives of education agencies in eighteen states indicate that a high degree of trust has been established between these agencies and the staff of AIT. This makes negotiation and compromise possible. It helps AIT satisfy its clients, which it must do, and enables AIT to retain the final decision on materials.

Issues that arise in consortium meetings can be both important and difficult to resolve. For example, the issue of ethnic groups became a major concern at a *Self Incorporated* meeting. The problem revolved around the script for a program on racial relations. A similar theme had been treated by an *Inside/Out* program; it dealt with relationships between English and French-speaking Canadian children. A number of agencies wanted the *Self Incorporated* program to deal with black/white relationships, but other agencies felt that such a program would be difficult to use in their areas. Test data from the *Inside/Out* program, AIT staff members pointed out, had demonstrated that children could generalize from the particular in the matter of racial problems. Given this, the agencies agreed to have the program produced as written for Indian/white relationships. Subsequent testing indicated that, for the *Self Incorporated* program as well, students could project from one set of relationships to others.

The point of the example, of course, is not that the decision was necessarily correct. What is important is the process through which the decision was reached. A problem was presented and a solution was reached cooperatively. Obviously, not every agency will be completely happy with every solution, but overall the level of satisfaction remains high.

Instructional Design and Materials Production: Review and Case Example

When the nature and volume of television-based curriculum materials produced by AIT are considered in relation to the size of the staff, there is reason to wonder, as Charles McIntyre of the University of Illinois puts it, how "AIT gets anything done at all."[4]

The key appears to be effective decentralization. All stages in the development of any project are usually completed by agencies or teams of individuals under contract to AIT. Much of the work is farmed out to others.

This style of operation has been effective because of workable procedures for coordination and control. The essence of materials design and production in the consortium development process is the management of the creative activities of others. The twin foundations of this management process are freedom to choose the best consultants and production agencies and the structures for quality control of the production process.

During the production phase control rests jointly with the Chief Consultant and the AIT Project Director/Executive Producer. This control keeps materials faithful to the prospectus and the curriculum design. Clear allocation of authority for final decisions is necessary also to the delicate process of achieving consensus among consortium members on issues arising during production.

To manage the creative process, AIT staff members must themselves be competent in various areas, including project administration. They must have enough content, instructional design, and production knowledge to select the best consultants and agencies. The competence of the national consultants and the demonstrated capabilities of the chosen production agencies are two positive features of the process often mentioned by consortium agencies.

In every consortium project there are two critical "go/no-go" decisions. The first comes at the initiation of a prospectus; the second, at the initiation of design and production. The latter is the more critical because of the large costs involved in production contracts.

Although participation tends to be greater during needs determination and conceptualization than during design and production, AIT continues to involve agencies in the substantive aspects of project development throughout the production phase. As the brief case analysis below shows, there is commitment by AIT to the idea of participation, commitment that extends to major restructuring of projects if necessary. This is not surprising, for the consortium agencies jointly fund the projects, and AIT organizes and manages them on their behalf.

When Original Expectations Are Not Met: The Case of *MeasureMetric*

The 1973 regional meetings on priorities identified metric education as an important area of need for new learning materials. Conversion to the metric system was on the horizon in the United States, and just beginning in Canada. There were clear indications that agencies would be called on to develop programs in this area. A preliminary report for a metric project was prepared and discussed at regional meetings in the spring of 1974, and a prospectus was developed and issued in September of that year.

The prospectus called for thirty-seven television programs with related print. The project would provide learning materials in the field of measurement, with the focus on the metric system. The materials would have affective, as well as cognitive goals, and would be developed for use at elementary, secondary, and adult levels. There would be two teacher education programs. AIT would implement staff leadership workshops on request. The teacher education materials were to be available in the spring of 1976, and the classroom materials the following September. The project would cost more than $1.5 million.

By the winter of 1974, it became apparent that the project as planned was too comprehensive and costly. Response to the prospectus indicated that, while metric education was considered highly important in a number of states, interest and commitment were not sufficient for such a large undertaking.

In February 1975 representatives of twelve state and provincial education agencies met in Atlanta to consider the desirability and feasibility of a metric consortium. This group agreed that a smaller project was necessary and possible, and suggested a number of major revisions in project design. The conceptual framework of the prospectus was accepted, but the project was reduced in size to twelve programs with related print for a fourth-, fifth-, and sixth-grade audience. The teacher's guide would have high priority. Modifications in the conceptualization were made to enable the project to fit in twelve lessons; but the proposed format—open-ended dramatizations—was retained. The delivery date of September 1976 was kept, but the budget was now just $300,000.

A project at this low budget level required a modification of the usual development process. The personnel and production resources of consortium agencies would be utilized for design, production, evaluation, and related materials development. AIT staff, notably the Project Director, would play a coordinating role, assisted by the project's Chief Consultant. Consortium agency representatives felt that this model, in addition to lowering costs, would have the advantage of giving them more control at all stages. AIT was willing to try the new approach.

The project went ahead with a consortium of nineteen agencies. By December 1975, a number of programs were in rough-cut form and ready for review at a consortium meeting. Scripts for all but one of the remaining programs were also ready.

At this meeting it became clear that the materials did not meet expectations. There was concern about whether the project was dealing with the content objectives. There was serious question about the format, and program quality itself did not seem to be up to standard. There was also a general feeling that the process through which the project was being developed was not effective. With the delivery just nine months ahead, agencies expressed serious reservations about the project.

Major revisions were urgently needed. It was agreed that a small group from the original design team would meet the following month to completely review curriculum design. In this process, the team would reduce the number of objectives and better define the intended audience.

Production arrangements also were revised and the work redistributed to agencies with greater capacity for the kind of programming expected. In addition, project management processes were modified, with the AIT Project Director and the Chief Consultant assuming stronger positions of control. The delivery date was postponed from September 1976 to January 1977.

AIT estimated that the changes would cost $66,000. To meet these additional expenses, AIT set out to bring new agencies into the consortium. It pledged to use its own funds to cover any deficit; consortium agencies were not asked to increase their contribution.

The small review team met in January 1976. Several independent evaluations of existing materials had been commissioned for this meeting. The team studied these and then drew up a revised curriculum design. The meeting also helped to achieve closer coordination between design team members and project writers/producers. From that point on, the project proceeded satisfactorily. Television materials of expected quality and a comprehensive teacher's guide were completed and in the classroom by January 1977.

The consortium development process demonstrated its resilience in the *MeasureMetric* project. Continual consultation with agencies led to major readjustments, first at the conceptualization stage, and later after production had begun.

There are, it seems, some lessons to be learned from the *MeasureMetric* experience. Placing the Project Director and the Chief Consultant in mere coordinating roles apparently did not work well. Difficulties in design and production could be blamed, at least in part, on the fragmentation of responsibility. The case also illustrates the kinds of problems that can arise when moving from one kind of curriculum area (affective) to another (cognitive).

Evaluation

The purpose of evaluation at AIT is to improve the quality of consortium products. As Research Director Saul Rockman said in a recent paper on evaluation methodology: "The central function of evaluation for AIT's consortium projects is to provide useful data to project production personnel."[5] Thus evaluation activities are primarily **formative,** and are carried out in various ways throughout the consortium development process. Summative evaluation to assess the overall effects of all project materials on students has not been part of the basic evaluation strategy, although some attempt to develop summary information on achievement of educational objectives for the television programs in *bread & butterflies* was made through an independent evaluation study. (This study is discussed further. See pages 81-84.)

The nature of AIT evaluation is described in the Evaluation Policy adopted by the AIT Board of Directors. It is reproduced in Appendix G.

From discussions with staff members and review of evaluation reports and methodologies, it is clear that AIT evaluation is primarily intended to make sure both program and print materials meet the users' expectations of technical, creative, and instructional quality. Thus far it has not attempted to determine the extent to which an entire project achieves measurable educational objectives. There are a number of reasons for this. One is that the goals of the affective education projects are generally stated in terms of the kind of classroom discussion each program is expected to generate—not the learning expected to take place. Determining whether these "discussion" goals are achieved has been a major component of evaluation.

Then too, the conditions under which evaluation is conducted make measurement of effects difficult (even for formative purposes). A major constraint is budget. Less than 10 percent of the *Self Incorporated* budget, for example, was allocated to evaluation, and costs for revision of programs were included in this figure. Furthermore, AIT has control of materials only during the production stage; thereafter, they are in the hands of user agencies. Evaluation of effects would have to take place after delivery of the full materials package to schools; it would require serious commitment to evaluation by school administrators and a substantial financial outlay by AIT if materials were to be recalled, revised, and redistributed.

Despite these difficulties, however, evaluation of effects is likely to occur with the cognitive materials produced in the project on the essential learning skills.

Given the policy and the constraints, the AIT staff has developed a serviceable formative evaluation system. This system extends

Table 4: Formative Evaluation System

Stages of Need Evaluation Product	**Criteria**	**Data**	**Decision-Makers**	**Decisions**
Need Evaluation	Degree to which shared and significant curriculum need exists	Judgment of educators at needs determination meetings; AIT Advisory Committee	AIT Board	Establish priority needs
Plan Evaluation	Degree to which a prospectus meets a need Coherence Feasibility	Prospectus Judgment of state agency officials Additional information from AIT	Consortium agency officials	To join a consortium
Design Evaluation Curriculum design	Fit with prospectus Coherence Feasibility	Judgment of —AIT staff —Chief Consultant —writers/producers —consortium agencies	AIT staff —Project Director —Chief Consultant	Accept/modify/reject
TV Evaluation A. Preformative —scenarios —script —rough-cuts	Fit with design Quality	Judgment of AIT Project Director and Chief Consultant	AIT Project Director, Chief Consultant	Accept/modify/reject
	Language Locale Interest-level	Judgment of: —audience —teachers —writers/producers	Writers/producers	Formative/development for individual program
B. Formative —prototype TV materials —(teacher guide sketches)	Attention Comprehension Classroom interaction Teacher attitude references Quality Feasibility Fit with design	From classroom test supervised by AIT	Writers/producers	Formative/development for individual program
		Test data Expert (user) judgment at consortium meetings.	AIT Project Director, Chief Consultant	Accept/modify/reject
			Consortium agency representatives	Accept/modify/reject
			AIT Project Director, Chief Consultant	Accept/modify/reject
			Writers/producers	Formative/development for individual program
Print Evaluation Teacher's guides Utilization materials Community awareness materials	Fit with design Quality Effectiveness	Judgment of: —AIT staff —users at consortium meetings Results of special surveys Classroom testing	AIT Project Director Chief Consultant Print designers/writers	Accept/modify/reject Formative/development
Project Utilization Evaluation Full project package	Extent of utilization —# stations broadcasting —# teachers trained —# and kind of awareness activities Quality	From special surveys Informal feedback to AIT Recognition through prizes, awards Informal feedback to AIT Extent of utilization overtime	AIT staff	Formative/development for future projects

throughout the consortium process, providing a variety of formative evaluation information to different decision-makers at different times. The system is summarized in Table 4.

The Stages of Evaluation

The fact that evaluation activity is carried on at a number of stages in the development process, beginning with the identification of needs, gives an idea of its importance in that process. Looking down the criteria column of Table 4, one can see a chain of criteria that operate to keep the eventual product as close to the need as possible.

The data column shows the extensive reliance on expert and user judgment typical of the evaluation effort. Special surveys aside, the only point in the process where research/evaluation techniques are applied is in formative evaluation for television and teacher guide components. The chart also shows the variety of decision-makers involved and the central control position of the Project Director/Consultant team. Note also that almost all decisions are formative, leading to modifications of materials and plans.

The full package of materials is not evaluated. Evaluation during the utilization phase is built on indirect indicators of the extent of utilization and of quality. In this connection the extent of utilization over a period of time is a criterion for judgments of quality.

1. Need, Plan and Design Evaluation

The activities of these early stages have been discussed in previous chapters. However, the place that these stages hold in the evaluation process should be emphasized. Later stages of evaluation (and development) rest on the quality of judgments made in these early stages. The sequential nature of these judgments have important consequences. By the time formative evaluation of programs begins, a number of basic parameters for the quality of the project have already been set. Television evaluation can only test the programs against the design. If the design or the conceptualization that underlie it are faulty, the quality of television programming can be irrelevant.

The matrix for the first three stages of evaluation reflects the process of matching expectations between users and AIT. No empirical test of products against criteria is made. What takes place is the evolution of a project through exchange of judgments among planners and administrators. The eventual quality of the project—especially its fit with the needs and curriculum of consortium agencies—depends to a great extent on the quality of this exchange.

2. Television Evaluation

The quality of the television component depends on a successful marriage between educational specifications and the creative talents and impulses of writers and producers. Evaluation activities are addressed to both aspects.

Preformative Evaluation

There are two parts to television evaluation: preformative and formative. Preformative activities have been described as an integral part of the production process (see pages 55-57). They consist primarily of intensive interaction with teachers and students in the specified age group to help writers develop approaches, scenarios, and scripts. Student and teacher reaction is used to insure that the final version of the program presents problems and situations that are real to the student audience, will hold the viewers' attention, and are useful in teaching.

Data from the preformative stage consist primarily of narrative reports written by local evaluation consultants for use by writers and producers. The reports also go to Project Director and the Chief Consultant. In combination with scenarios and scripts, these data form the basis for decisions by the Project Director/Executive Producer and Chief Consultants to accept products at this stage or to ask for modifications.

Formative Evaluation

In the formative stage, AIT sets out to test preliminary versions of programs in the classrooms of consortium agencies. Although it is able to test only programs completed early in the production phase, the results of these tests help shape the development of the entire series.

In general, evaluation during this phase focuses on four criteria:

Student **attention** to the program

Student **comprehension** of program themes and characters

The nature of **classroom interaction** stimulated by the program

The degree of **liking** of the program by students and teachers

In collecting data on each of these, AIT uses the evaluation techniques described below.

Sampling

Programs are tested with the help of consortium agencies that volunteer to take part in the evaluation effort. Each agency agrees to select a representative sample of classes in its state or province. Among the factors generally considered in selecting classes are the socioeconomic level of the students and whether or not the teacher has used television in the classroom before (experienced teachers are preferred). AIT does not control the selection, and there are indications that, on occasion, agencies have had to depart from the sampling plan.[6] Overall, however, samples appear to be reasonably representative.

Methods

Participating agencies select observers who will conduct the evaluation in the classroom. These observers are trained by AIT in the use of various evaluation instruments. Data are collected locally, then returned to AIT for coding and analysis. Results are shared with writers/producers and with consortium members, both in writing and through presentations at consortium meetings. Normally just two months are available for the entire process, which usually consists of testing six to eight programs. For the *Self Incorporated* project, eight programs were evaluated with the help of twenty-five agencies in sixteen states; this involved 225 classrooms and 5,685 students.[7]

In each participating classroom a pair of trained observers collect the data on a variety of measures, using structured instruments. This is done during the instructional sequence, which includes both program viewing and post-program discussion, and through interviews after the class is over. Figure 6 shows the observation procedures used in the evaluation of *Self Incorporated*.[8]

Measures

The measurements used in field tests have evolved through the evaluation experiences of several projects, notably *Inside/Out*, *bread & butterflies*, and *Self Incorporated*. These were all affective education projects. Their goals were stated in terms, not of cognitive learning, but of the kind of discussion that each program was expected to stimulate. Except in *bread & butterflies* there were no attempts to measure student achievement of specific cognitive goals. The testing has focused, instead, on the more general measures of comprehension.

Attention Measures

A major component of AIT evaluation is the measurement of student attention to programs. As Saul Rockman puts it: "Attention measures employed to examine television programs are based in part on the assumption that if the audience is not watching, it is not learning. . . . If the students in a classroom are not watching a television monitor, they are likely to be doing something else—something else that may be disturbing for the teacher and other students. Attention to the screen is thus a necessary though not sufficient condition for optimal learning."[9]

The methodology for measuring attention is simple. Two observers each watch half of a class to see if their eyes are on the screen. At twenty-second intervals the observers switch assignments. The observers also stagger the initiation of their observation so that one makes notations at :00, :20, :40 seconds, and so on, while the other observes at :10, :30, :50 and so on until the program ends. The result is observation of five students every ten seconds throughout the program, with four groups of five being observed every twenty seconds. A portion of a sample instrument on which observations are recorded is reproduced in Figure 7.

Figure 6: Flow Chart of Classroom Activities and Corresponding Observations

Time[1]	Classroom Activity	Observation
00	Teacher introduces observers to students	Observers explain the purpose of their visit
02	PROGRAM VIEWING	061 and 062 alternately observe students' attention to the program.
17	DISCUSSION[2]	061 keeps a running narrative account of classroom discussion. 062 keeps the Classroom Discussion Profile (CDP)/analytic form.
32	QUESTIONNAIRE AND INTERVIEWS[3]	061 remains in the classroom and supervises questionnaire administration. 062 conducts interviews with selected students in the hallway.
45		

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[1] Time in minutes: denotes total elapsed from the start of class period.

[2, 3] The timing of the two events may be interchanged.

Figure 7: Attention Profile Form

		Observer 1			Observer 2
:00		Final DING of opening credits	:10		
:20			:30		
:40			:50		. . . . Hi ya Virg
1:00			1:10		sure . . . .
1:20		your own gun now.	1:30		
1:40			1:50		Skikis. ("Chee-kes")
2:00			2:10		rattle of bucket
2:20		Look at the fun things (singing)	2:30		you're my friend. (singing)
2:40		I hope you see . . . (singing)	2:50		you're my friend. (singing)
3:00		FAR OUT.	3:10		Yeah.
3:20		sure was fun . . .	3:30		
3:40			3:50		Whities are wrecking . . .
4:00		. . . but we don't.	4:10		. . . . This is good.
4:20			4:30		
4:40			4:50		
5:00			5:10		
5:20		can't catch 'em anymore.	5:30		SPLASH: pole falls into H^{2}O
5:40		my pole, got another one.	5:50		
6:00		We can't. We just can't.	6:10		Virg, you're not worried
6:20		lipstick all over us. I heard	6:30		Our friendship.
6:40		a Navajo & I'm white?	6:50		I guess I'll wear 'em, too.
7:00		Guess I better go.	7:10		Class dismissed.
7:20		eat with one of those Navies . . .	7:30		an assignment the first day.
7:40			7:50		. . . his own people. "Aw, . . .
8:00			8:10		
8:20		Why won't that school . . .	8:30		
8:40		won't touch eggs any other way	8:50		
9:00		note say this about the owls?	9:10		means illness or bad luck.
9:20		Hey, Whitey.	9:30		Whities are just sissies.
9:40			9:50		
10:00			10:10		. . . The only time a Navie
10:20		if you want to be our friend,	10:30		
10:40		C'mon Eddy, be alert	10:50		get a cone before class?
11:00		& I don't want to go with them	11:10		No, I can't. I have to talk
11:20		been wondering about Virgil	11:30		. . . Well, all the kids
11:40		look bad in basketball tryouts	11:50		
12:00		I think you better think	12:10		wise use of our resources
12:20		Do you mean what the land	12:30		I think Navies have some
12:40			12:50		besides, I have church on Sunday
13:00			13:10		
13:20		Let's split.	13:30		
13:40			13:50		Educational Agencies (closing)
14:00		Utah State Board (closing	14:10		
14:20			14:30		

The resultant data for each ten-second point in a program are summed across all the observations in the sample, and proportions viewing the program are plotted against a description of the events taking place in the program. Figures 8 and 9 are attention graphs for two *Self Incorporated* programs ("Two Sons" and "Pressure Makes Perfect"). These data are used in combination with data in other categories as a basis for program revision and for changes in teacher's guides and other print materials. In "Two Sons," for example, the scene "Playing cards with Kevin Sparks" at 7:40 in the program was re-done.

Comprehension

Comprehension measures are obtained through program-specific questionnaires administered to students at the end of the class. Questions deal with the comprehension of program theme and concept, perceptions of major characters, attitude towards concept and characters, appeal of program segments, salience of and identification with the program events, comprehensibility of language, filmic techniques, and plot.[10] Data from questionnaires are cross-tabulated with demographic variables, such as sex and rural-suburban-urban residence. An important part of the analysis in affective series is determining the ability of the program to stimulate thinking about alternative solutions to the problems presented in the program.

Comprehension data help producers clarify scenes and sequences unclear to students. Often the data point to certain filmic techniques (such as flashbacks, non-temporal sequencing, etc.) that have created confusion. This will prompt changes in the program, the teacher's guide, or both. Comprehension data for "Pressure Makes Perfect" indicate that viewers were confused during the opening scenes, which involved a number of special effects.

Classroom Interaction

For affective series, evaluation has centered on the pattern of post-viewing discussion stimulated by the program. The *Self Incorporated* evaluation included concern for the following:

1. The degree to which the students and teachers focused their comments upon the program itself and the characterizations in it or upon their own feelings and actions in analagous situations.

2. The degree to which the comments were structured to consider alternative behaviors, choices, and the decision-making process.

3. The amount of teacher initiation required to maintain the momentum of the discussion.

Figure 8: Attention Profile—"Two Sons"

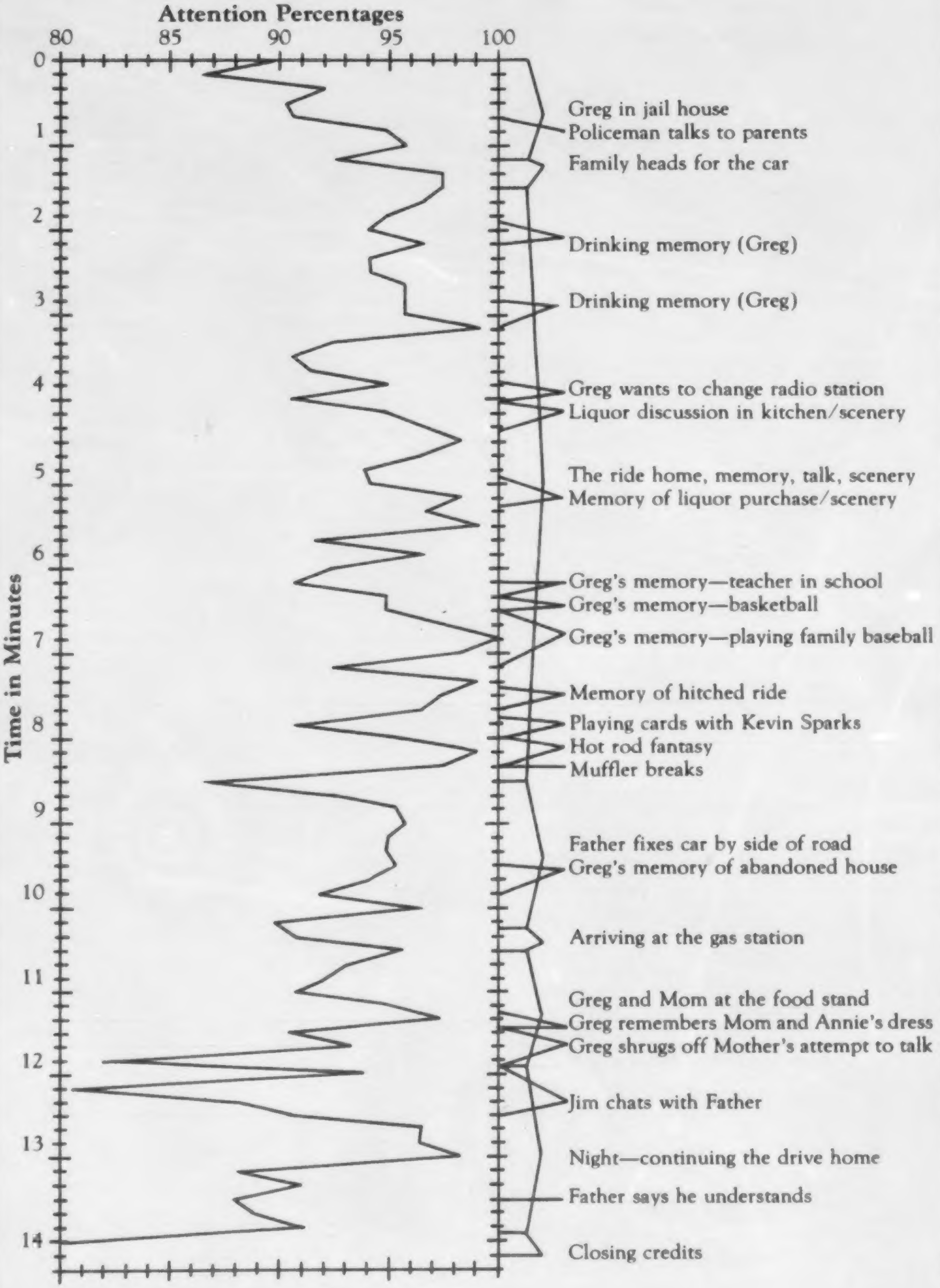

Figure 9: Attention Profile—"Pressure Makes Perfect"

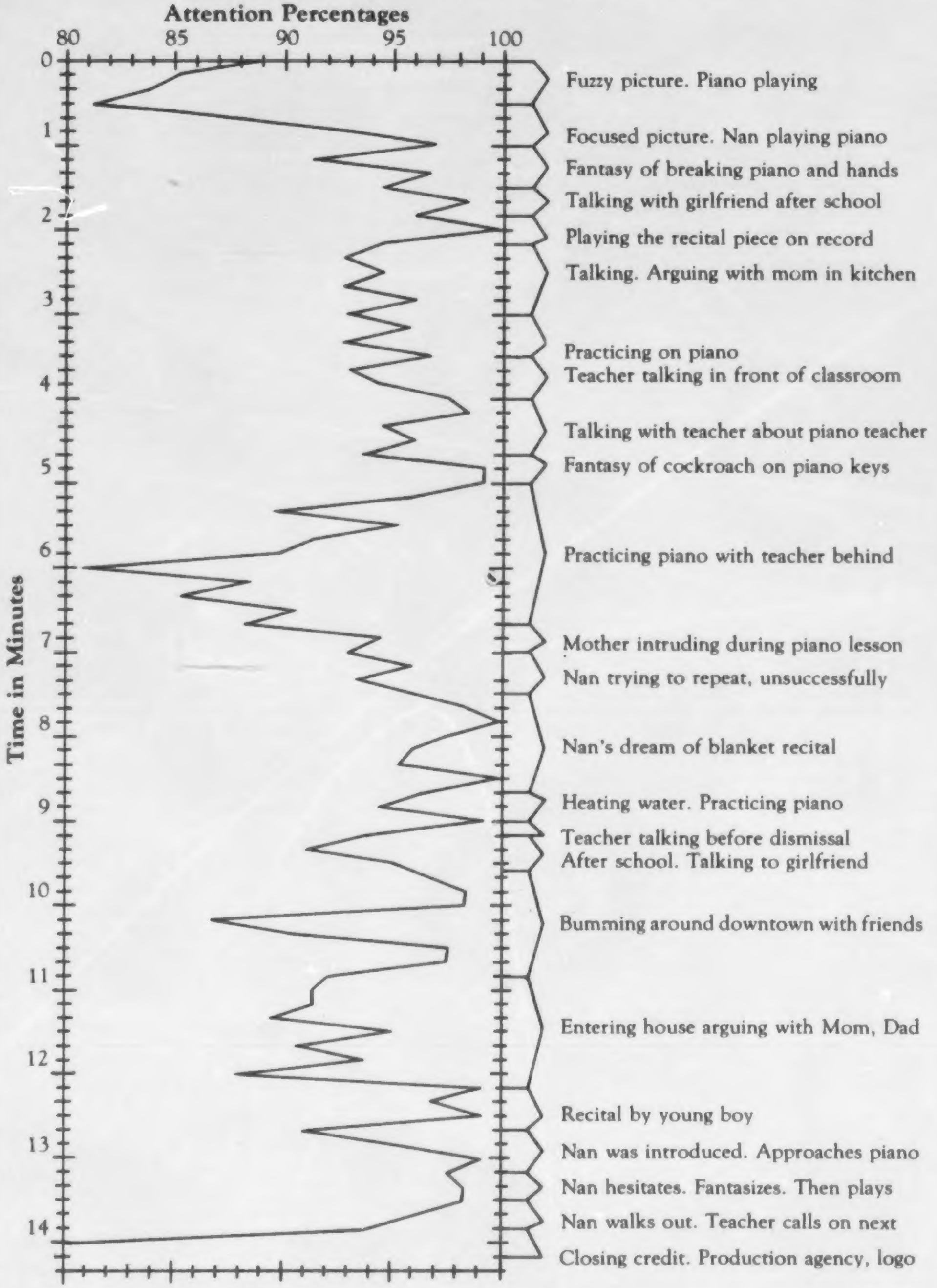

Figure 10 reproduces a form on which an observer recorded the content of each thirty-second segment of the discussion in one or more categories. These categories composed a "... continuum of discussion content from specifics about the program, through personal experience, to conceptual and abstract thinking about the program theme."[11] Both teacher and student behavior were recorded. The categories were:

1. Program only—no personal experience, program content exclusively.
2. Self/Program—relating personal experience to some program element.
3. Self/Other—discussion of personal experience, no mention of the program.
4. Others/Concepts—neither the program nor the self is mentioned, impersonal statements and statements of more or less abstract principles or empirical generalizations.
5. Choices/Decisions—an independent category of discussion about coping mechanisms, choices, decision-making, and alternative behaviors.

One observer made these categorical observations. A second observer kept a running narrative account of the discussion, both to cross-check the categorical observations and to give further insight into student comprehension.

The results of categorical observations are plotted to show the amount of discussion on each dimension over a period of time, as well as the relationship between discussion and the various dimensions. Figure 11 reproduces an interaction profile for a *Self Incorporated* program, "Two Sons." There are two graphs per program, one for students and one for teachers. Data of this type are used in conjunction with attention and comprehension data to provide further insight into program effectiveness. The discussion pattern for "program only" in "Two Sons," for example, supported comprehension data indicating that viewers did not understand many of the sequences. The narrative records of discussion showed that much of the program-centered discussion focused on these sequences—what they meant, and how they fit together. The "Two Sons" attention profile also identified these problems. As noted previously, these data are used both to improve programs and to call attention to areas of concern that should be covered in the teacher's guide. Such data also are taken into account in the preparation of in-service materials.

Teacher Opinions and Attitudes

If television materials are to be used in the classroom, they must

Figure 10: Classroom Discussion Profile Analytic Form

KEY:

PROGRAM—Program specific, no reference to self.
SELF/PROGRAM—Relates own experience to program.
SELF/OTHERS—Relates to own experiences, alone and with others.
OTHERS/CONCEPTS—Abstractions, principles, non-self others.
CHOICES/DECISIONS—Choices, decisions, alternatives.

Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

→ Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

→ Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

→ Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
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Teacher Initiatives

→ Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

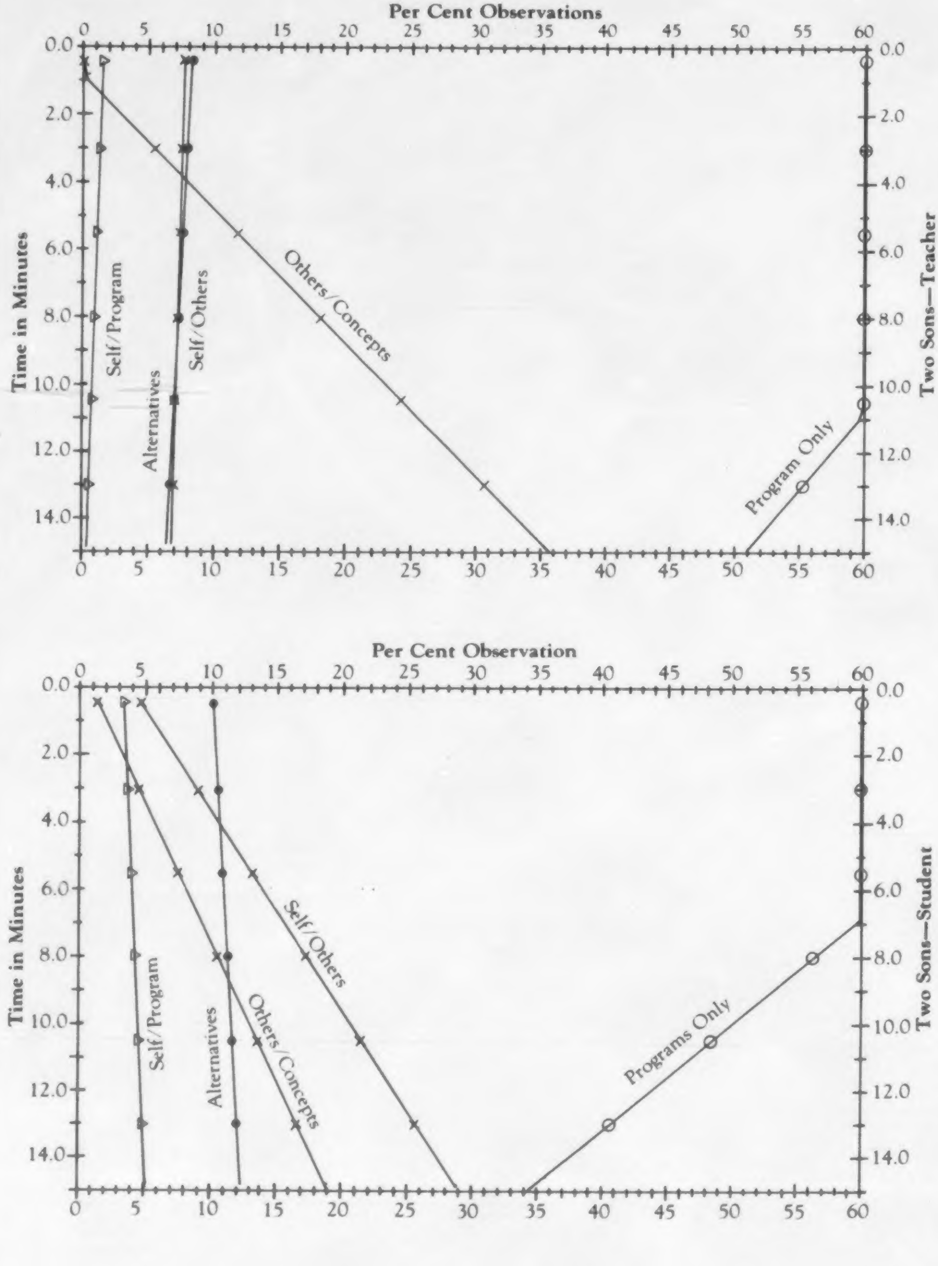
Teacher Initiatives

→ Time Ending

	Program	Self/ Program	Self/ Others	Others/ Concepts	Choices/ Decisions
Student					
Teacher					

Teacher Initiatives

Figure 11: Classroom Discussion Profile—"Two Sons"



be attractive to teachers. Hence, teacher opinions and attitudes form a fourth area of analysis in formative evaluation.

Teacher questionnaires include questions on the reactions of students to the materials, on their own feelings as they taught the lesson, and on the lesson itself. Teachers also are asked for suggestions for improving the television materials.

Some General Issues

The above summary suggests but does not fully describe the data and data analysis that characterize formative evaluation of the television component. The formative report on "Two Sons," for example, is thirty-five pages long. In such an analysis, empirical data are combined with impressions of the writers and producers and that of the AIT staff. Comprehension data are a major source of suggestion for change, although the other data are used as well.

Reports of formative evaluation both recommend changes to resolve problems and identify problems without recommending changes. There is, of course, not enough time or money to make all the changes that evaluation might indicate are advisable. In practice changes are recommended when comprehension is low. Diminished attention by itself does not usually lead to changes when other data indicate that this has not affected student comprehension.

Although written reports on evaluated programs eventually become available, because of time pressure the results are often presented orally to writers and producers. One can only speculate on the effect this has, but undoubtedly there is some loss of detail in the process.

It is important to note again that formative evaluation often points to areas in the television materials that can be strengthened by teacher awareness and activity. This leads to specific suggestions in the teacher's guide and in-service materials. But while these data-based suggestions are helpful, they exist only for programs that have been evaluated.

Time and funds do not permit re-analysis of programs once changes are made. Thus, there is no "confirming" step in the evaluation process, other than the expert judgment of the AIT Project Director and the Chief Consultant.

3. Print Evaluation

The print components of specific projects are also the object of systematic evaluation, within limits of time and resources. The fit of these components with the project design is judged by the designers/writers, the Project Director, and the Chief Consultant, and on occasion by external panels of teachers and specialists. Frequently there is classroom testing of drafts of individual lesson units from the guides and of in-service materials.

Special studies are also carried out on occasion. An example is the study for the *Self Incorporated* teacher's guide, which was described earlier in the chapter. In the fall and winter of 1975-76, supported by an Exxon Corporation grant, AIT conducted a field study of its community awareness/information activities and materials. The objective of this was to determine how the materials were actually being used and to identify effective strategies for future information/awareness activity.

4. Project Utilization Evaluation

Once a project is delivered, AIT's evaluation role diminishes. However, there is a great deal of continuing interest in how much—and how well—a project is being utilized. Periodic surveys of public television stations determine the extent to which the series is being broadcast and give some idea of the number of children reached.

The in-service and community activities of consortium agencies are followed informally. On occasion, AIT does make a special survey of utilization activities. Such an analysis was done for *Inside/Out* through a mailed questionnaire. While working on other projects, AIT staff members stay in touch with representatives of the consortium agencies, and this provides a continuing source of information on utilization. In some projects, a special consortium meeting, for more formal review of utilization, may be held a year or more after first distribution of the materials.

Time itself provides a measure of the quality of materials. Projects that receive widespread and continuous utilization over a number of years (such as *Ripples*) have met the test of assimilation: they have become part of education in the states and provinces. This is taken as evidence of quality. Where the utilization has been disappointing, as with *Images & Things*, informal attempts are made to determine why. These, incidentally, led to the conclusion that *Images & Things*, though of high production quality, did not fit well with the art education activities of many schools.

Another informal test of quality is the recognition given to a project by various institutions and groups. This generally takes the form of a citation or award, such as the Distinguished Service Award of a professional organization, the Ohio State Award, or the Emmy of the National Academy of Television Arts and Sciences.

Contracted Evaluation: *Inside/Out* and *bread & butterflies*

AIT has commissioned evaluations of two consortium projects: *Inside/Out* and *bread & butterflies*. The first of these was conducted by the Bureau of Public Discussion, Division of Continuing Education, Indiana University.[12] Under the supervision of Saul Rockman, AIT Research Director, this project developed a number of the analysis techniques used for formative evaluation, notably the classroom interaction profile.

The Educational Testing Service conducted the *bread & butterflies*

Figure 12: Production Process

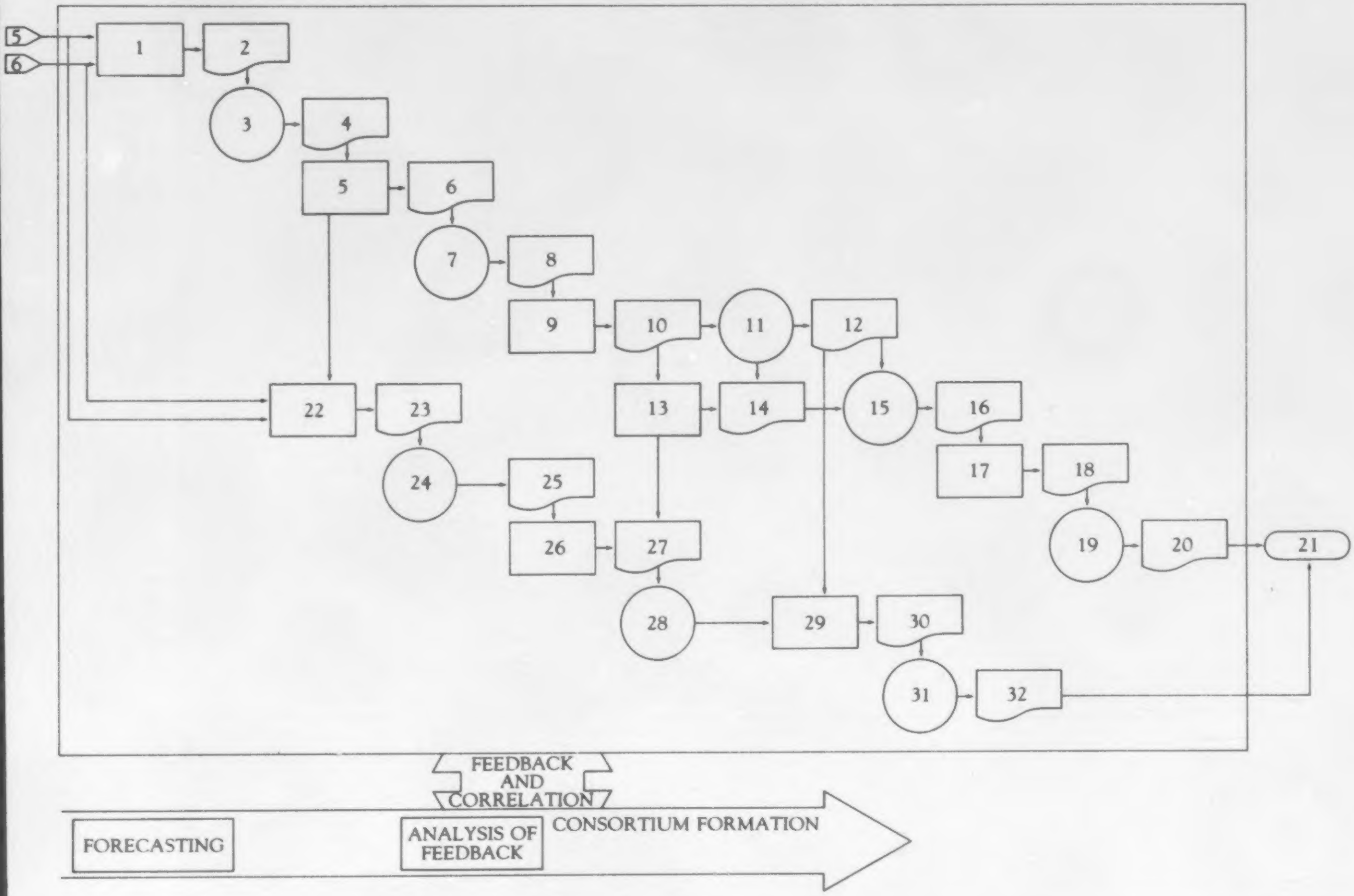


Figure 12: Production Process Labeling Key for Chart

1. Television writers/producers
2. Scenarios
3. Chief Consultant/Project Director review/approval
4. Feedback
5. Television writers/producers
6. Scripts
7. Chief Consultant/Project Director review/approval
8. Feedback
9. Television writers/producers
10. Early programs
11. Consortium meeting review
12. Feedback
13. Formative evaluation
14. Feedback
15. Chief Consultant/Project Director review/approval
16. Feedback
17. Television writers/producers
18. Rough-cuts
19. Chief Consultant/Project Director review/approval
20. Final television programs
21. Delivery
22. Print design/writing teams
23. Plans/designs
24. Chief Consultant/Project Director review/approval
25. Feedback
26. Print design/writing teams
27. Prints drafts
28. Chief Consultant/Project Director review/approval
29. Print design/writing teams
30. Revised drafts
31. Chief Consultant/Project Director review/approval
32. Final print products

evaluation.[13] Although the classroom interaction profile was not employed here, the attention profile developed by AIT was first extensively used in this evaluation. (The two techniques were used together for the first time with *Self Incorporated.*)

The *bread & butterflies* evaluation is of special interest because it is the only one that attempted to measure student achievement of specific educational objectives for each television program. The design team for *bread & butterflies* specified behavioral objectives to be accomplished by the television program alone. Pre- and post-measures were used to test achievement of objectives. With few exceptions, findings indicated no gain among the student sample on the objectives. Data from classroom observation and teacher questionnaires indicated that the programs were effective in other ways. As the evaluators put it, "There is no question that the overall impact of these five programs is quite positive, **if** their purpose is agreed to be that of an **affective stimulus** for fourth, fifth, and sixth grade children."[14] (Author's emphasis.) It is interesting to note that in the design and evaluation of *Self Incorporated*, the project that followed *bread & butterflies*, this purpose was implicitly accepted. The only objectives stated were those of expected classroom discussion; no cognitive objectives were given—or measured.

The Future of Evaluation at AIT

The *bread & butterflies* example must be judged in light of the realities of evaluation at AIT. Official evaluation policy does not encourage the measurement of effects without outside funding. Nor has there been pressure from consortium agencies for this type of evaluation. The argument that affective series are not amenable to evaluation of effects also carries some weight.

As AIT programming moves into cognitive areas, however, measurement of learning gains becomes more important. In particular, it is considered desirable that the essential learning skills project have a major evaluation component that includes attention to cognitive learning gains. Such an evaluation is anticipated.

Summary

The activities of the production process are summarized in Figure 12. Shown in circles are the control and review functions of the AIT Project Director and the Chief Consultant, and the project review functions. Also indicated are the timing relationships between television production, print production, and formative evaluation. Activities begin after an instructional design is completed, and end with the delivery of materials to consortium agencies. Consortium formation efforts are largely completed during this phase.

Interposed between the completion of programs and print products and the delivery date are the duplication and distribution of program and print materials. The key roles here are played by the AIT Operations Division and its departments of Field Services, Publications, and Distribution. At this point, information and community awareness activities accelerate. The assimilation phase of the consortium development process is about to begin.

CHAPTER FIVE

Project Assimilation

Introduction: Verification, Utilization and Assimilation

The consortium approach to materials development will continue to work only as long as the materials produced meet common and significant needs. Verification of the fit between a project and a curriculum need is built in at several points.

First, there is the verification of funding: when an agency commits money on the basis of a project prospectus, it is saying that the project appears to fit a curriculum need.

A second check point comes when the prospectus and designs are translated into scenarios and scripts for the television programs. Here the feasibility of **television** learning materials in the curriculum area receives a full test. It is one thing to write about the television component in a prospectus and a curriculum design; it is quite another thing to create a television program that has aesthetic quality and that also meets design specifications.

A third check comes with the field testing of programs in classrooms, and a fourth with review by agency representatives at consortium meetings. Both serve as preliminary tests of the quality and utility of the materials. In fact, all of these early points of verification are preliminary to the real test: Will materials become an integral part of classroom activity? Will they in fact be **assimilated** by education?

AIT consortium materials are designed to be useful for a period of seven or more years. If projects are widely and persistently used three years after delivery, it is considered that assimilation has been achieved. Of the four series that, at this writing, have been in the classroom three or more years, three meet the criterion: *Ripples*, *bread & butterflies*, and *Inside/Out*. The fourth series, *Images & Things*, has not been widely and persistently used.

The consortium development process itself contributes to utilization. Participation in needs determination, project conceptualization, and project design makes agencies aware of the shape of the project, and this in turn makes possible advance utilization planning. Consortium meetings stimulate a sharing of ideas on materials use and implementation. The very act of investing money and time in a project leads to agency concern for the wide and wise use of the project materials.

Two Assimilation Activities: Teacher In-Service Education and Information

AIT carries out two kinds of activity designed to enhance project assimilation. First, it provides consortium agencies with materials and services to help teachers use the materials effectively in the classroom. Second, it undertakes a variety of information activities to increase awareness, understanding, and—as a consequence—adoption of the materials. These activities include assistance with public information and community awareness programs at the state and local level, and nationwide information and promotion support.

The teacher in-service and information components of the consortium development process are similar in some ways. Both begin early in the development cycle and culminate in major efforts just before delivery of materials. In both, AIT involvement continues beyond delivery. And both—after initial demonstrations made possible by grant funds—have been receiving increased attention and financial support in recent projects.

The audience for the in-service activity is quite specific: teachers. The goal is improved skills. Information activities reach out to various professional and community audiences. Each component is also the responsibility of different staff members of AIT, although their work is coordinated by the Project Director.

Teacher In-Service: Paving the Way for Materials Utilization

A major conclusion derived from the early project development experience of NIT was the need for a carefully designed total lesson, not merely a television program. The three essential components of this total lesson are: an on-screen event, classroom activities as suggested by the teacher's guide, and the teacher. The last component—the teacher—is the key to effective materials use. If teachers don't like or understand a product, they either will not use it or will not use it well.

In-service activities are the responsibility of many different agencies in the states and provinces. Departments of education often play central roles, but the responsibility does not stop there. In any one state or province, four or five other organizations may be involved. Teacher programs for *Inside/Out* in the state of Maine, for example, involved the State Departments of Education and Cultural Services, Health and Welfare, Mental Health, and Corrections. Also involved were Maine Blue Cross/Blue Shield, the Public Television Network, the University of Maine, and Maine's Regional Medical Program.

1. Nature and Scope of In-Service Activity

The extent of in-service efforts varies among the states and provinces. Many will develop their own special television materials. The usual model for teacher in-service is a leadership training workshop whose participants subsequently hold teacher in-service workshops on a decentralized basis. *Inside/Out* in-service efforts in Maine began with a five-day leadership training institute, followed by eleven one-day workshops for teachers at the county level. Participants in the leadership workshop received course credit from the University of Maine. In North Carolina early in-service efforts for *Inside/Out* involved some 325 teachers and elementary school supervisors in full or half-day workshops. Similar models and efforts are found in other provinces and states.

2. AIT Contribution to In-Service Activities

For the in-service activities of consortium agencies, AIT provides utilization kits that contain workshop guides and resource materials. The materials are designed to be adapted to workshops of varying length. AIT also produces teacher in-service films for some projects. Three twenty-minute in-service programs accompany *Images & Things.*

AIT staff members participate, at the request of consortium agencies, in the planning and implementation of in-service activities. Personnel from the main offices in Bloomington and from the regional offices serve as resources to the agencies in this area.

Information from consortium agencies on the effectiveness of in-service materials is sought regularly. For the *Inside/Out* project, a special consortium meeting was held a year after delivery of the materials. The purpose was to review in-service efforts and to provide opportunity for the exchange of ideas and materials among the agencies.

Informing and Involving Professional and Community Audiences

Cooperation and coordination are the heart of the consortium process. A key to their achievement, and to the widest and best use of what they produce, is communication.

1. Informal Network

The communication needs of the consortium process are great. In everyday operations, many persons in the United States and Canada are tied into AIT operations by telephone and by mail. Educators, broadcasters, consultants on various projects, program producers, printers, film technicians, evaluators—the list could go on and on. This informal communication network is indispensable to large undertakings by a small staff.

In a given day, the Project Director will have several telephone conversations with production agencies and perhaps the Chief Consultant. The Associate Executive Director for Development will exchange half a dozen letters and have as many telephone talks with members of current or future consortia—on items ranging from funding to the language used in one lesson of a teacher's guide. The Director of Instructional design will be talking with leaders in the curriculum area to identify possible print design consultants for an in-service workshop manual. The AIT Research Director will be arranging onsite evaluation of two programs in six school districts in as many states and provinces. The Communications Associate will be planning a project presentation at a national convention of a professional association, discussing local information activities with several consortium agencies, and reading letters stimulated by an article in one of AIT's various publications. Meanwhile, requests for film and tape purchases and rentals will be coming into the Distribution Department.

2. Formal Communications

Communications Associate Sylvia Straub plans and executes formal communications activities of two kinds: those designed to publicize consortium projects at the national level and those designed to assist consortium agencies in their own information programs. Some of the current information activities were originally developed and demonstrated in the *Inside/Out* and *bread & butterflies* projects with the vital assistance of Exxon Corporation. Once their value was established, these activities were perpetuated in the budgets and operations of future consortia.

National Information

National publicity and promotion serve consortium projects in several ways. A favorable article on *Inside/Out* in *TV Guide*, for example, reached parents whose children were watching the programs in class. It also reached teachers, administrators, state legislators, and others with interest in, and influence on, what the schools are doing.

A number of strategies have been developed to stimulate national publicity. Presentations are made at national conventions of education and broadcasting associations. Demonstrations of projects in use—with students and teachers in actual classrooms—are held for the press in cities like New York and Washington. Professional journals and newspapers and magazines of general circulation are encouraged to publish articles on AIT projects.

In addition, AIT regularly issues publications to various audiences. (See Table 5.) **AIT Report,** which outlines future developments at the agency, goes to those who have facilitated the funding of previous projects. The quarterly **AIT Newsletter,** written and edited by the Publications Department, reports on current activities to a nationwide audience of educators and broadcasters. There are also frequent special reports to keep consortium agencies up to date on the various projects.

Table 5: AIT Information/Community Awareness Materials

Item	Audience	Purpose/Content	Circulation
AIT Reports	Educators/ Corporations	Outline future developments	800
AIT Newsletter	Educators/ Broadcasters	Report current developments	20,000
Project Reports	Consortium Agencies	Report of status of specific projects	250
Community Awareness Materials	Schools/ Community Groups	Involve schools/ communities in project utilization	10,000 (per project)
Press Materials	TV Stations/ Professional Journals/ Newspapers	For agency use in obtaining press coverage	2,500 per item

Agency-Level Information

AIT undertakes a variety of activities to assist consortium agencies in their information programs.

An increasingly important product at this level is the kit of school and community awareness materials. These are intended to help consortium agencies involve school officials, teachers, and parents in activities to support project implementation. The materials are designed by a communication design team, which meets under staff coordination during the production phase of project development. The designs are reviewed by agency representatives at consortium meetings.

Included in the school/community awareness materials are press releases, suggestions for local activities, and promotional materials such as brochures and posters. In addition, AIT will, on request, assist in the development of local information campaigns.

The value of these promotional activities can be documented. For example, according to a survey of school television utilization in Wisconsin, "New series for students on television that were well used were those that had a great deal of promotion and/or face-to-face inservice."[1] The quality and low cost of promotional materials made available to consortium agencies are frequently mentioned by agency personnel as important consortium benefits.

3. Consortium Agency Promotion

AIT assists consortium agencies in their information efforts, but most of the job of establishing television projects as part of the school curriculum is done by educators and educational broadcasters in the states and provinces. Their energy and resources, and their understanding of the schools and communities with which they work, make assimilation of projects possible.

Agency efforts to promote utilization of consortium materials can be quite extensive. Kentucky Educational Television produced thirty half-hour parent information programs to accompany the introduction of *Inside/Out*. These materials were made available to other consortium agencies at cost. The Hawaii Department of Education produced similar television materials for local evening broadcast for *Self Incorporated*. The Iowa Educational Broadcasting Network developed a special parent education project for *Self Incorporated*. Maine, Ontario, South Carolina, and others produced *Inside/Out* promotional materials. Many states and provinces hold meetings of education leaders, arrange press coverage, make and distribute radio spots. In short, most agencies mount major efforts to create community understanding of consortium materials.

Technical Stewardship of Materials

The visual component of a project is available in a variety of formats, and this itself furthers project assimilation. In addition to open broadcast through television stations, programs reach children through various videotape playback devices. For classrooms without television, the materials also are provided on 16mm film.

AIT assumes responsibility for the distribution of consortium materials after a project is completed. Through informal communication (much of it at consortium meetings for later projects) and through periodic utilization surveys, the agency stays in touch with the users. Knowing how much—and how well—project materials are being used is helpful in planning future efforts. Once a series has been in the classrooms for the seven-year period generally considered optimal, revision becomes a possibility. Revision not only brings a series up to date; it also offers opportunities for technical and creative improvement. Under consideration now is a revision of *Ripples*, which has been in use since 1970.

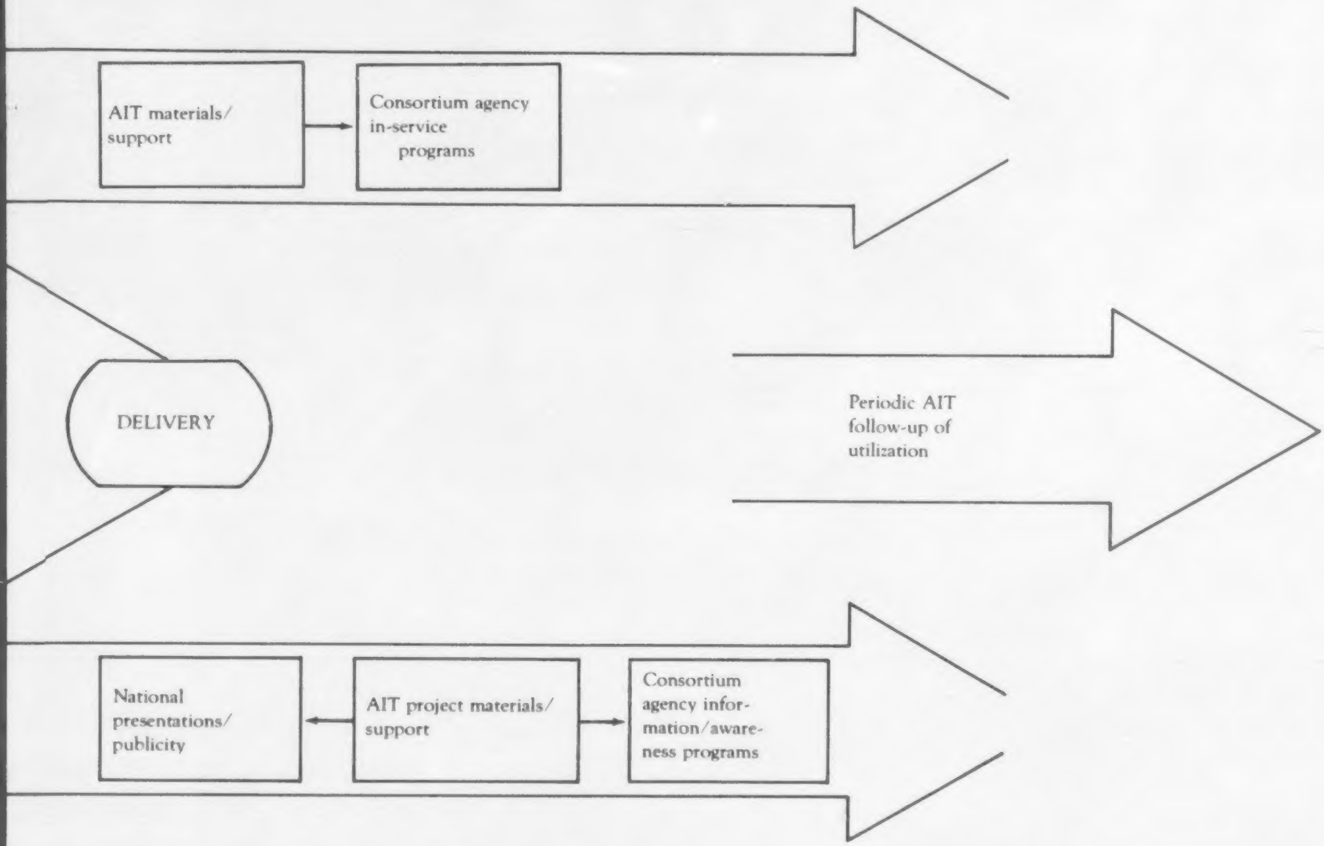
A Summary Diagram

It is likely that the trend toward increased consortium agency efforts in teacher in-service and community information/awareness will continue. These efforts appear to be yielding community interest and more and better utilization.

With *The Heart of Teaching* project, AIT has moved directly into in-service education. The utility of this series will have implications for future AIT efforts in the in-service field—efforts not related directly to specific projects.

Assimilation of the materials into the programs of state and provincial education agencies remains the final verification of the effectiveness of any consortium project. Earlier check-points in the process (funding, design, program production, evaluation, consortium review) serve to tell AIT how well expectations of education leaders are being met. The extent to which project materials are used is a check on

Figure 13: Assimilation Process


AIT materials/ support
Consortium agency in-service programs
DELIVERY
Periodic AIT follow-up of utilization
National presentations/ publicity
AIT project materials/ support
Consortium agency information/awareness programs

the fit between the total project and the need that originated it. Thus assimilation is the "reality test"—for the combined judgments of the educators who identified the need and shared in the development process and the staff and consultants of AIT.

Figure 13 summarizes the activities of the assimilation phase of the consortium development process. Both in-service and information activities begin prior to delivery and continue beyond delivery for varying lengths of time, usually no more than one school year. Periodic follow-up of materials utilization provides information to AIT on assimilation.

The technical activities of the consortium development process are mostly completed at this point, since the continuing in-service and information activities are largely local.

CHAPTER SIX

AIT in Perspective: Generalizations on the Consortium Development Process

What can be learned from the AIT experience? What are the elements that have combined, so far, to make the consortium development process work? A grasp of the essential components of the process would appear helpful, particularly if the pattern established by AIT within education and television is to have implications for other efforts for educational change.

An observer is immediately struck by the fact that the consortium process evolved in response to developments within education and school television. There appear to be **conditions** under which a consortium model of organized action is likely to be effective. A most obvious structural condition is decentralization: the consortium approach would have no place in a highly unified system, with strong central control of resources. Other conditions, perhaps not so obvious, are discussed in the pages that follow.

The consortium process has a number of conceptual, organizational, and technical elements that combine to form a functional whole. All rest on the basic idea of pooling resources to meet a common goal. These elements, also discussed here, are highly interrelated, with overlap of ideas. Acknowledging the limitations inherent in generalizing from a single example, one may take these elements as lessons from the AIT experience.

The Conditions for Action

A Common Need and a Proven Model of Response

Consortium participation is voluntary and is based on agency perception that participation will help meet important needs. These needs must be shared widely enough to attract the number of agencies necessary for consortium action. Thus the extent to which a need is widely shared becomes an important pre-condition for consortium success. In addition, there must be reason to believe that a consortium can and will meet the need. Confidence in the consortium pattern is increased when it has been proven workable: nothing succeeds like success.

The near unanimous support for the creation of AIT that emerged at the Atlanta meeting in 1972 reflected widespread recognition among education agencies that the time had come for cooperative development of school television materials. *Sesame Street*, *Ripples*, and *Inside/Out* had demonstrated that high quality production in instructional television was possible; NIT had shown that the consortium approach could work. The need for the proposed agency was evident—an agency that would strengthen education by disseminating the best thinking and practice in important curriculum areas through television-based learning materials. In turn, this clear and common goal helped AIT establish the trust necessary to act on behalf of other organizations. AIT has successfully balanced the need for central control of production with its commitment to consortium agency participation in the development process; this success is due in large part to general agreement among AIT and the consortium participants on the ultimate aims of projects.

In sum, when AIT was formed, two necessary conditions for action existed: a widely shared need for school television of higher quality and a proven model to meet this need—the NIT consortium approach. It seems clear that the existence of the NIT consortium projects crystallized the need among education agencies and that NIT initiatives were necessary. The speed with which the agency was formed after the Atlanta meeting, however, testifies to the belief that the time was ripe for action.

Behind a common need and a proven model lie additional conditions. One can be thought of as "learning from experience." Whether education agencies would have come to recognize the need to pool resources without the preceding twenty years of trial and error may be debated. Nevertheless, it seems clear that this experience did contribute to that recognition. It may also be that the experience of an NIT—of an agency whose existence depended on identifying a need and a role in response to that need—is also a necessary part of the environment for action.

Government subsidy created the predecessor agencies of AIT; loans from the Indiana University Foundation and The Ford Foundation and grants from Exxon Corporation provided the venture capital that made transition from subsidy to self-support possible. AIT represents one of the all-too-few instances of a demonstration project achieving independence and self-support.

Legitimization

A consortium arrangement requires agencies to commit resources to a central organization responsible for managing these resources and delivering results. The willingness of agencies to make this kind of commitment is strengthened when the coordinating organization is endorsed by respected institutions and individuals. Legitimization encourages confidence; confidence engenders trust; and trust—as well as mutual benefit—holds the process together.

The formal endorsement of the Council of Chief State School Officers (CCSSO) and the Council of Ministers of Education, Canada (CMEC) provided this legitimization for AIT. In appointing the AIT Board of Directors (a majority of the Board members are chief education officers of states and provinces), the CCSSO and CMEC insure that AIT remains closely tied to education. These ties are vital in the needs determination and priority setting processes. Final determination of needs and priorities by leaders in education establishes their legitimacy within education as projects are developed.

Key Elements of the Consortium Development Process

A Conceptual Framework

Cooperative action requires some consistency of purpose and a clear image of how the central management agency is linked with the dynamics of the field it serves. The lack of such purpose and image appears to have contributed to the false starts that occurred through the early history of school television. When AIT defined the role of school television as serving to disseminate the best thinking and practice in important curriculum areas, it established a long-range perspective as a guide to short-term decisions. In this conceptual framework it also built the basis for common goals and expectations between AIT and education agencies.

Much of the effectiveness of AIT in working with the diverse education agencies in Canada and the United States can be attributed to its cooperative, low-key, service-oriented style, one that encourages trust and confidence. This style in turn rests on the vital elements of the AIT philosophy: service to education, partnership in reform, cooperation in all phases of development.

Functional Mechanisms for Client Participation

If a consortium process is to work, mechanisms must be established that enable members to participate substantially in the actions of the consortium. This requires identification of the points in the process where participation is possible and commitment to act upon the results of participation—to reach and accept workable compromises.

The AIT experience has demonstrated that the participants must be agencies that command the resources for cooperative action and that hold or share the responsibility for utilization of the materials.

For AIT, the clients are predominantly state and provincial agencies of education in the United States and Canada. While the teacher ultimately controls the use and the student is the eventual consumer of what the consortium produces, state and provincial officials are ultimately responsible for both, and they make the choices among alternative uses of funds for costly educational materials.

The AIT consortium process involves structured participation of these clients throughout—in priority setting, in project conceptualization and production, and, through the Board of Directors, in the determination of agency policy. Commitment to act on the results of participation is evident in the AIT processes: in needs determination, in the responsiveness to the consortium at various stages of conceptualization and design, and in a project budget that provides for revision based on evaluation and consortium reaction.

A Shared Indicator of Success

Every organization must have a way to find out if it is meeting its goals. Essential are a clear criterion of success and the mechanisms to determine whether the criterion is being met. The criterion and mechanisms will be effective to the extent that clients understand and concur in the relevance of both.

AIT has such a criterion: widespread and persistent utilization of consortium materials. A further measure is continued success in forming consortia. In this sense, AIT functions in the "marketplace" of education. As long as materials continue to meet significant needs and client expectations for quality and cost, it will be able to form consortia for new projects. Individual agencies are free to join or not join individual consortium projects. (An alternative would be annual dues and automatic participation in all projects.) This freedom to select among projects is a vital check on the fit between projects and needs.

A Systems Approach to Change

Modifying instructional content and methods is a slow and difficult process, one that must take into account the many interlocking components of education. A narrow approach is not likely to be successful.

In the earliest consortium projects, AIT and the member agencies recognized that television programs are important but not sufficient in achieving education change. In consequence, projects now include a wide range of integrated components—television, teacher guides, in-service education and community awareness materials and activities. The integrated lesson approach fits with current trends in education. It also recognizes the role of teacher in-service preparation.

In building integrated lessons, the project designers must properly identify the function of television. They must make certain that television is appropriately used, and they must also insure that teaching/

learning needs for which television is not appropriate are covered by other components.

Materials Design and Production Procedures

The main elements of the AIT design process are:

1. Identification of Significant and Widely Shared Needs

AIT has chosen to identify needs through persons legally responsible for education—not through direct research on the target audience. In effect, AIT accepts leaders in education agencies as the representatives of the needs of the children. Among the benefits of this procedure are relative speed in determining needs and involvement in the needs determination process of those who make decisions on materials for their own states and provinces.

2. Verification of Need Through Conceptualization

A broad statement describing an educational need may be interpreted differently by different people. AIT procedures verify the need through the development of a prospectus. If the project described meets a real need, agencies will join the consortium (when funds are available). If the project does not meet a need, it will be modified until it does—or will be rejected.

3. Application of Theory

Specialized knowledge is brought to bear on the project through a series of teams. Members of these teams are chosen because of their content or instructional design qualifications. Theory of various kinds is applied to the problem through the knowledge and experience of these consultants. This procedure is, in some ways, a practical shortcut for more elaborate research/developmental procedures advocated in texts on instructional design.

4. Extensive Learner Verification

A great deal of effort and resources have gone into initial work with the target audience to develop materials that are appealing and educative. This phase of project development is carried out by the writers and producers, not by the educational designers. In effect, writers and producers are asked to rely heavily on contact with audiences in developing television programs that meet educational specifications.

5. Functional Evaluation

Limited time and resources make extensive evaluation of materials impractical. Consequently activities have been developed that provide maximum return for dollars and time invested. Evaluation is formative in nature and partial in coverage. The data are used for modification of materials; the entire process is functional.

6. Client Involvement

A vital feature of AIT design procedure is client involvement throughout. As noted above, these clients are the education decision-makers, not the eventual audience. Involvement begins with the needs determination process and continues through production. At every stage consortium agency opinions are heeded, as the metric education experience attests.

7. Control Procedures

There are two critical quality control problems. One is to maintain the integrity of the content; to accomplish this, AIT has developed the role of Chief Consultant. The second problem is production quality, and here AIT relies on the skill and knowledge of its Project Director. In establishing the authority of the Chief Consultant/Project Director team, AIT has unified educational and creative concerns and balanced the requirements of individual agencies with the need to deliver materials useful in many places. Thus far, the results have been acceptable in both spheres.

The AIT development system incorporates many—but not all—of the generally accepted features of "scientific" instructional design.[1] The basic design steps typical of this approach are: determine educational need and the context in which they are to be met, set objectives, conduct audience research, design prototypes to verify objectives, test, revise and test again until objectives are met. The AIT version is technically weak at certain stages: objectives are not always clear, testing is partial, and testing after initial revision is generally lacking. But AIT design procedures are strong in other areas, notably learner-verification and analysis of the context in which materials are used. They are especially strong in involving and satisfying users of the materials.

It is also important to note the value of having a customary set of design procedures, regardless of what they are. With a standard system, both staff and clients know what to expect at each stage. The system also provides a planning and management framework that enables AIT staff members to function in more than one project at once.

The pursuit of quality extends to the print components. Particularly important has been the ability of print design teams to develop teacher's guides and workshop materials that are closely integrated with the television lesson.

Materials at Relatively Low Cost to Clients

Certain features of the AIT development process operate to keep costs low. One is the extensive use of consultants in place of permanent staff. This minimizes overhead. It also enables AIT to move readily into different areas of the curriculum.

Another such feature is analysis, with heavy consortium involvement, to determine just what is and is not necessary to make the materials work. An example of this is the analysis of the size and scope of the teacher's guide conducted during the development of *Self Incorporated*.

Flexible Management and Planning

Operating a consortium project requires a form of management that is flexible and responsive. It must support action at all stages without establishing bureaucratic constraints; it must provide accountability without rigidity; and it must revolve around rapid and effective decision-making mechanisms. The AIT experience further indicates the importance of the composition of the project management team and the stability of a broad organizational base.

There are a number of features of the organizational structure and management procedures at AIT that enable it to meet the demands of consortium projects.

1. Well-Defined Roles and Responsibilities

Operating several projects simultaneously with a small staff requires clearly defined roles and responsibilities:

Consortium Formation is the responsibility of the Associate Executive Director for Development. This includes coordination of fund raising with the activities of materials development. The role requires a good memory for detail, patience, the ability to listen well, an intimate knowledge of the personnel, programs, and politics of the sixty consortium states and provinces, and strong leadership capabilities.

Project Management is the responsibility of the Associate Executive Director for Projects. Assuming both the role of Project Director and Executive Producer in each project, this person integrates the work of staff members responsible for instructional design/print development, evaluation, and communication activities, and is directly responsible for program materials. The position requires skills in television production and educational design, strong administrative and planning capabilities, and the ability to negotiate effectively.

Instructional Design/Print Development is the responsibility of the Director of Instructional Design. This person supervises design team activities and the development of teacher's guides and in-service workshop materials. The role requires competence in instructional development and management.

Research/Evaluation is the responsibility of the Research Director. This role requires skills in research and evaluation and the ability to develop practical evaluation methodologies for use under time and fiscal constraints.

Public Information is the responsibility of the Communications Associate. The role encompasses the development of information and awareness strategies and materials. It requires skills in public relations and information, and familiarity with professional associations in education and broadcasting.

While each person has specific roles, the group must work together as a team. The volume of work is such that considerable responsibility falls on each person. There is much informal consultation on issues, both technical and political. There is also a great deal of openness and no one's work goes uncriticized; but the responsibility remains where it is placed.

Continuity of staff also has been a factor in building an effective management team for consortium projects. The complexities of the task are not mastered quickly: it takes time to become a fully functional member of the AIT family, one familiar with the consortium process and with leaders in education and broadcasting. Key staff members have been with the agency an average of eight years.

There is one more point to be made about roles and responsibilities. As AIT's Executive Director has observed, institutional development has become an unofficial role of Exxon Corporation. According to Ed Cohen, "Exxon has provided—principally through the thoughtful efforts of its Contributions Advisor, George Aguirre—strategic grants to nurture growth in new directions." The importance of these grants is increasingly evident with each new project.

2. Effective Decision-Making

Decision-making is deceptively casual. Major decisions may be reached at lunch, in the hall, in an airport, or at a consortium meeting. Consultation among staff is highly informal: there are relatively few staff meetings. But the decision-making process has a firm foundation. Few decisions are reached without extensive informal discussion among the staff—and with representatives of the consortium agencies. The philosophy and procedures of the consortium approach provide a basic framework for decision and action.

One of the notable features of the AIT style of operation is constant self-analysis. Staff members always seem to be working at two levels—at **what** they are doing and at **how** they are doing it. The process through which things are done is always under scrutiny. Changes in the process are not made casually, and when they are made, results are closely watched.

3. Client Orientation

This feature is part system and part attitude. System components include such varied elements as consultation with clients in the establishment of participation fees, willingness to adjust funding arrangements to individual agency operations, cash-flow planning to enable projects to begin before full funding, and AIT staff support for in-service and community awareness activity.

The attitudinal components may be more important. First among these is the willingness and ability to listen carefully to the needs and concerns of individual agencies. Leaders of these agencies reciprocate with trust and confidence—the trust and confidence that hold consortia together and help smooth out disagreement and controversy. Second is a continuing concern for the effects of project decisions on consortium agencies. This concern helps avoid unilateral action by staff members in the press to meet rigid time schedules.

4. A Strong Organizational Base

The development staff is responsible for the consortium projects. That it can carry out a large volume of work with relatively few people is in no small way due to the fact that it is supported by a strong management infrastructure that seeks to help, not to control. This management system forms the Operations Division of the agency, which employs more people than the development group. Headed by Associate Executive Director Don Sandberg, the Operations Division consists of the telecourse acquisition and distribution function begun under NIT, a business office, a publications and information office, and a field services operation that includes regional offices in the East, South, Midwest, and West.

The telecourse acquisition and distribution activities serve an important function in school television. In 1974 AIT course rentals accounted for 19 percent of the courses rented nationwide, and 16.3 percent of the average station's annual hours of instructional television.[2] The success of this operation, and of its audiovisual activity, help to give AIT an increasingly strong overall role in education.

Consortium projects rely heavily on the support provided by the AIT publications and business departments. The field services offices also perform a variety of support functions, including coordination of telecourse rentals, sales of films and other audiovisual products, and occasional in-service assistance to consortium agencies.

5. A Pragmatic Process

Two main currents flow through the consortium development process. One is the flexibility and willingness to change on the part of the staff. The other is self-analysis and criticism, with particular focus on the process through which things get done. These two currents unite to form a general planning philosophy that is pragmatic and responsive, not prescriptive. AIT does not have a master blueprint for the future. There is no written five-year plan. Instead, the agency's planning procedure is very much like what Harlan Cleveland has called "improvisation on a general sense of direction."[3]

If a modification of the design and development procedures will make a project possible, give it a try (*MeasureMetric*). If affective in-service materials are needed, clear through the Board of Directors and develop a project (*The Heart of Teaching*). If private sector funding will help, use it (*Inside/Out*, *Trade-offs*).

This flexibility, however, operates within the basic structures of the consortium development process. For example, private sector funding for the economic education project (*Trade-offs*) is considerable but so is that of the consortium agencies. These agencies, in fact, fund all aspects of the project related to curriculum design, and this keeps educational decisions firmly within state and provincial control. Private sector funds are used for production.

Flexibility of this sort seems necessary if the consortium process is to adapt to the changing needs of education. It is both necessary and desirable, provided that it keeps the essential elements of continuing self-analysis and self-criticism.

The Consortium Process and Educational Change: A Summay and Note on Theory

In sum, there appear to be three conditions favorable to the consortium development process: a widespread and recognized need, a proven model of response to the need, and legitimization by credible and influential sources. The AIT consortium process has seven major characteristics that seem generalizable: a conceptual framework, functional mechanisms for client participation, shared indicators of success, a systems approach to the change process, proven materials design and production procedures, relatively low cost to clients, and a flexible management and planning system.

There are limitations to the use of descriptive case studies in developing "firm understanding of the processes involved in organizational change," as Giacquinta has noted in his review of research on the process of organizational change in schools.[4] Nevertheless, the consortium development process seems to be working well enough to warrant the kind of generalizations summarized above, provided the limitations of the study are borne in mind.

At a minimum, the consortium process has been successful in making operational the principle of participation in change—which, though not well supported empirically, has enough general support in the literature to be considered an important proposition, if not a law.[5]

Given the difficulty of testing models of educational change in true experimental fashion, those intent on such change may have to make do with less than absolute certainty when seeking guidelines for action. In this context, the AIT consortium approach is worth consideration—for its emphasis on partnership with education in incremental change for needs identified by participants, and also for its procedures for meeting these needs with materials of high technical, creative, and educational quality.

When one loosens the bonds of empirical confidence and accepts models of change not so strongly supported by scientific evidence (as all administrators must), then a variety of models and strategies for change are available to help interpret the AIT experience. Ronald Havelock has identified more than forty different change strategies.[6] The problem then becomes one of selection.

Of the various models of the change process that have been advanced, the "user-oriented" model described by Ronald and Mary Havelock most closely approximates the AIT consortium development process:

> First, user need is the paramount consideration and the only acceptable value stance for the change agent; second, the diagnosis of need always has to be an integral part of the total process; third, the outside change agent should be non-directive, rarely, if ever, violating the integrity of the user by placing himself in a directive or expert status; fourth, the internal resources already existing and easily accessible within the client system itself should be fully utilized; and fifth, self-initiated and self-applied innovation will have the strongest user commitment and the best chance for long term survival.[7]

It seems clear that the AIT consortium development process satisfies the conditions of this model to a remarkably high degree.

And what does this tell us? That the basic structures of the consortium approach fit well with at least one theoretical model of the change process—or, looked at from the other side, that one model of the change process receives support from a descriptive case study of a functioning mechanism for educational change. Either way, we gain further confidence in both the consortium process and the model.

AIT in the Future

The future seems bright for the consortium development process—and for the Agency for Instructional Television. However, there are challenges on the horizon that will test the flexibility of the process.

Many of these challenges came with the decision to develop the essential learning skills project. The size and cost of this project raise consortium development to an entirely new level. Initial plans call for sixty programs and related print, at a total cost of about four million dollars; and this could be just the first of several levels. A project of that size requires new consortium participation and funding patterns. The costs are such that state and provincial agencies will have to develop different funding arrangements to participate, though partial funding from the Corporation for Public Broadcasting will help. Meanwhile, coordination with curriculum leaders in consortium agencies will be complicated by the fact that the project cuts across the basic curriculum areas—reading, writing, and arithmetic. Utilization activity also may become more complicated. Resistance to television in the mainstream of teaching could be high.

The essential learning skills project will be a cognitive one and will require new models for television lessons. Different formats must be developed and tested. The evaluation component also will have to be expanded and further systematized; it must retain the strengths of the existing system, but deal much more directly with student achievement of educational objectives.

The size and scope of the project will place new demands on internal staff arrangements. The heavier production schedule itself will require staff expansion, and the writing and design teams also will multiply. This sharp growth will test current operational procedures, making unity, coherence, communication, and control much more difficult. Such problems will be intensified by the simultaneous development of the economic education project, which in itself departs from past models, both in the nature of its funding and in plans for utilization activity.

There is reason to believe, however, that these challenges will be met. AIT has shown that it can be flexible and responsive as needs and demands change. It has demonstrated its ability to meet the expectations of consortium agencies and the leaders of these agencies now have faith in the consortium process.

A beginning has been made. To continue to serve the needs of education, AIT will have to continue to change and grow. The AIT of the 1980s may be quite different from that of the 1970s.

NOTES

NOTES

Chapter One

1. Virtually every one of the more than 600 telecourses reviewed by the National Center for School and College Television assessment conferences featured a television teacher. Reports on each of the assessment conferences (1966-68) are as follows: *Instructional Television in Music Education, Instructional Television in Art Education, Television in Higher Education: Social Work Education, Television in Health and Physical Education, Television in Mathematics Education, Television in Science Education, Television in Foreign Language Education, Television in Social Studies Education, Television in Higher Education: Psychology, Television in Language Arts Education.*

2. *Instructional Television in Music Education*, op. cit., p. 5.

3. James W. Armsey and Norman C. Dahl, *An Inquiry Into the Uses of Instructional Technology* (New York: The Ford Foundation, 1973), p. 103. See also Wilbur Schramm et al., *The New Educational Media: Memo to Educational Planners*, and UNESCO, *New Educational Media in Action: Case Studies for Planners.*

4. Godwin Chu and Wilbur Schramm, *Learning From Television: What the Research Says* (Washington, D.C.: National Association of Educational Broadcasters, 1967).

5. Harry S. Broudy, *The Real World of the Public Schools* (New York: Harcourt Brace Jovanovich, Inc., 1972), p. 6.

6. David Turney, "Sisyphus Revisited," in *Perspectives on Curriculum Development, 1776-1976*, ed. O. L. Davis, Jr. (Washington, D.C.: Association for Supervision and Curriculum Development, 1976), pp. 228-29.

7. Broudy, op. cit., pp. 35-36.

8. Joseph B. Giacquinta has summarized the empirical research, finding it generally inadequate, particularly with respect to such widely accepted ideas as the importance of "participation" in the change process. See "The Processes of Organizational Change in the Schools," in *Review of Research in Education*, vol. 1, ed. Fred N. Herlinger (Itasca, Illinois: Peacock Publishers, Inc., 1973).

9. Quoted in Turney, op. cit., p. 228.

10. Schramm, ed., *Quality in Instructional Television* (Honolulu: University Press of Hawaii, 1972), p. 221.

11. For a concise summary of the characteristics of effective instructional television, see ibid., pp. 211-18.

Chapter Two

No notes

Chapter Three

1. For a review of public television structures, see Natan Katzman, *A Report for the CPB/NCES Programming Project* (Washington, D.C.: National Association of Educational Broadcasters, 1976).

Chapter Four

1. See Richard M. Polsky, *Getting to Sesame Street: Origins of the Children's Television Workshop* (New York: Praeger Publishing, 1974).

2. Telephone interview, February 1976.

3. From a formative evaluation report to AIT, May 1975.

4. Personal communication, September 1975.

5. Saul Rockman, "The Functions of Evaluation in Cooperative Projects: The AIT Experience" (Paper delivered at the International Conference on Evaluation and Research in Educational Television and Radio, Open University, Milton Keynes, England, April 9-13, 1976), p. 2. In 1977 an edited version of the paper was printed in the proceedings of the conference.

6. Saul Rockman and Taiksup Auh, *Summary of the Formative Evaluation of Self Incorporated Programs* (Bloomington, Indiana: Agency for Instructional Television, 1976), p. 40.

7. Ibid., p. V.

8. Ibid., p. 24.

9. Rockman, "The Functions of Evaluation," p. 4.

10. Rockman and Auh, op. cit., p. 27.

11. Ibid., p. 33.

12. Charles Kuhlman and William Wiley, *The Inside/Out Evaluation: The First Five Programs* (Bloomington, Indiana: Bureau of Public Discussion, Division of Continuing Education, Indiana University; National Instructional Television Center, 1972).

13. Ronald Flaugher and Joan Knapp, *Report on Evaluation Activities of the bread & butterflies Project* (Princeton, New Jersey: Educational Testing Service, 1974).

14. Ibid., p. 51.

Chapter Five

1. "Wisconsin Educational Radio and Television Networks: 1974-75 Assessment Survey Results," (Madison, Wisconsin: Educational Communications Board, 1975).

Chapter Six

1. See Robert H. Davis, Lawrence T. Alexander, and Stephen L. Yelon, *Learning Systems Design* (New York: McGraw-Hill Book Co., 1974).

2. Katzman, op. cit., p. 53.

3. Harlan Cleveland, *The Future Executive* (New York: Harper and Row, Inc., 1971).

4. Giacquinta, op. cit., p. 203.

5. Ibid., p. 188.

6. Ronald G. Havelock, *The Change Agent's Guide to Innovation in Education* (Englewood Cliffs, New Jersey: Educational Technology Publications, 1973), pp. 174-75.

7. Ronald G. Havelock and Mary C. Havelock, *Training for Change Agents* (Ann Arbor: University of Michigan, 1973), p. 8.

APPENDICES

APPENDIX A:
CASE STUDY OF
SELF INCORPORATED CONCEPTUALIZATION

It is possible to look at five AIT projects as a whole, linked together by a common educational approach and format. These are the "affective education" projects: *Ripples*, *Inside/Out*, *bread & butterflies*, *Self Incorporated*, and *The Heart of Teaching*. Four projects deal with emotional or "affective" issues facing children at different ages or in different contexts. *Ripples* focuses on the early childhood. *Inside/Out* deals with problems of emotional well-being for eight-to-ten-year-olds; *Self Incorporated* tackles similar themes for eleven-to-thirteen-year-olds; *bread & butterflies* is built around affective issues for nine-to-thirteen-year-old children that are associated with education and work. *The Heart of Teaching* grows out of a need to help teachers deal with affective issues in the school. All five projects emphasize open-ended, dramatic formats designed to stimulate viewer involvement in emotional issues, although other designs are used as well.

It would greatly overstate the case to imply that these projects grew out of an early master plan. In fact, they have tended to evolve, one after another, as earlier projects achieved success. There are, however, explicit linkages between *Inside/Out* and *Self Incorporated* that make the development of these projects a revealing case example of the conceptualization process. With one structural exception, the steps of conceptualization for all projects can be traced through the various documents that evolved. The exception was the prospectus for *Self Incorporated*, which combined typical prospectus content with instructional design. This last component is normally presented in a separate document. It was possible to combine the two here because of the initial planning accomplished in earlier projects.

History of the Need

Ripples grew out of the assessment conferences held by NCSCT in the mid-60s. It deals with a wide range of issues in early childhood education. Chief Consultant Rose Mukerji's experience with an earlier experimental television series influenced the development of a program format that features children in real settings and poses problems but does not provide solutions. The open-ended dramatic format of later AIT projects originated here.

At the time that *Ripples* was being produced, an NIT staff member attended the annual meeting of the Society of State Directors for Health, Physical Education and Recreation. Discussions about *Ripples* at this meeting, and the condition of health education in general, were sources of the original idea for *Inside/Out*. The idea itself was discussed extensively with potential consortium members by the staff of NIT. Judging that sufficient support for a project consortium existed, NIT went ahead with conceptualization and production.

Inside/Out was (and is) widely used, and its success contributed to the decision to regularize the consortium development process through the formation of AIT. When AIT priorities were being established through regional meetings in 1973, "life-coping skills" emerged as a high priority for continued development. AIT staff interpreted the "life-coping skills" need to mean an expansion of the *Inside/Out* approach for an older age group. Consultation with user agencies supported this interpretation, and conceptualization of *Self Incorporated* began.

Conceptualization of *Inside/Out*

The *Inside/Out* prospectus was circulated in 1971. It describes a broad need for health education to move beyond the traditional curriculum to the complex social problems facing children. Health education is clearly the curriculum area under consideration. The conceptualization is based on two documents: a national school health education study, and a publication of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. The word "health" appears in the title or organization affiliation of five of the seven members of the planning committee. A survey of health education interests of some five thousand students in Connecticut was a major source of information.

The experience and special knowledge of the planners of *Inside/Out* led them to believe that traditional approaches to health education lacked sufficient emphasis on *emotions*. Consequently, they combined their thinking as health educators with a model of learning for emotions called *affective* education.

This model was built around three interactive "functional areas" of learning: self-image, physical self, and relationships with people and the environment. The three functional areas were to be developed through eight concepts. Each of these concepts would emphasize a different aspect of the three functional areas; each could also be related to "well-established health education themes." The functional areas and concepts were put together in a matrix (Table 1) as a basis for project design.

Goal statements are scattered throughout the prospectus. As seems typical of affective education, these are broad statements such as ". . . the student should derive greater insight about himself as a distinct individual, responsible to himself, to others, and to his world, both immediate and remote." Citing the White House Conference on Children, the planners conceived of the project as helping students develop "self-realization" or a "sense of identity."

Table 1*

CONCEPTS	FUNCTIONAL AREAS		
	Self-Image	Physical Self	Relationships
Using	3	2	1
Growing	3	1	2
Loving	1	3	2
Hurting	2	3	1
Enjoying	2	1	3
Fearing	1	3	2
Choosing	2	1	3
Hating	1	3	2

The numbers in the cells indicate the emphasis to be given each functional area within each concept (1 high, 3 low).

The prospectus incorporated the open-ended dramatic format as the best approach to involving students in affective issues. In encountering situations where they must themselves draw conclusions, students would be able to "personalize" and thus better understand the experience.

Conceptualization of *Self Incorporated*

Self Incorporated was created to meet a need labeled "life-coping skills." The conceptualization was developed in two documents: a *preliminary report* dated April, 1974, and a *prospectus* dated September, 1974. The preliminary report was discussed with potential consortium members at regional meetings in May and June; and additional written comments were received from individuals in thirty-two states and three provinces.

While there are explicit references in these documents to *Inside/Out*, there are also differences in the conceptual framework, differences reflected in (and, in part, growing from) the different composition of the planning teams. Two members of the *Inside/Out* teams carried over

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*From A *Proposal for an Instructional Television Series in Health Education* (National Instructional Television Center: Bloomington, Indiana, Autumn, 1971).

into *Self Incorporated.* Both of these were health educators. The other members of the two teams that developed the preliminary report and the prospectus were drawn from other areas of education. In place of health education, one finds titles and affiliations in communications, curriculum and instruction, social studies and psychoanalysis. The conceptual framework is based not on health education research and curriculum studies, but squarely on the field of affective education as reflected in yearbooks of the Association for Supervision and Curriculum Development and in other affective education texts.

The conceptualization suggested by the prospectus team, in keeping with the life-coping skills motif, was based on a model (Figure 2) emphasizing skills in dealing, or "coping," with problems of the intended age group. The approach is overtly behavioral. The planners' view of life-coping skills was that ". . . each individual chooses the issues that are important from among a myriad of stimuli that impinge on his or her consciousness. As a result of a decision-making process, the person acts in a particular way to cope with the issue or problem. These actions may maintain the self as it is or defend it, may nurture it, or may challenge the 'self' and cause it to change."

The prospectus proposes learning activities that will enable the student to practice and improve these coping skills. The planners found the open-ended dramatic format for television presentations to be a good approach to this end, and print materials are proposed to help the teacher plan additional learning activities for "decision-making, valuing, communicating, and interacting with others."

Thus a new conceptual framework was developed, by different people with different perspectives on education. Why? Part of the answer lies in the fact that *Self Incorporated* was designed for a different age group—the early adolescent. *Inside/Out* was intended for younger children with different problems. *Self Incorporated* required considerable new thinking. In fact, reactions to the preliminary report for *Self Incorporated* indicated that potential consortium members were concerned that the new series might be a re-hashing of *Inside/Out.* They did not want this. The prospectus, as a consequence, reflects considerable additional thought on and analysis of the intended audience. The preliminary report devotes slightly more than one page to a discussion of the audience, and this comes well within the body of the document. The prospectus has four pages on the topic, and these come directly after two pages of background discussion at the beginning. These four pages lead directly to the detailed model; the preliminary report offers no explicit model.

A second reason for a different conceptual framework for *Self Incorporated* emerged from the diverse use of *Inside/Out.* Since the earlier series was used extensively in curriculum areas other than health education, especially in social studies. AIT sought to expand the utility of *Self Incorporated* by involving people from many disciplines in the conceptualization process.

Discussion

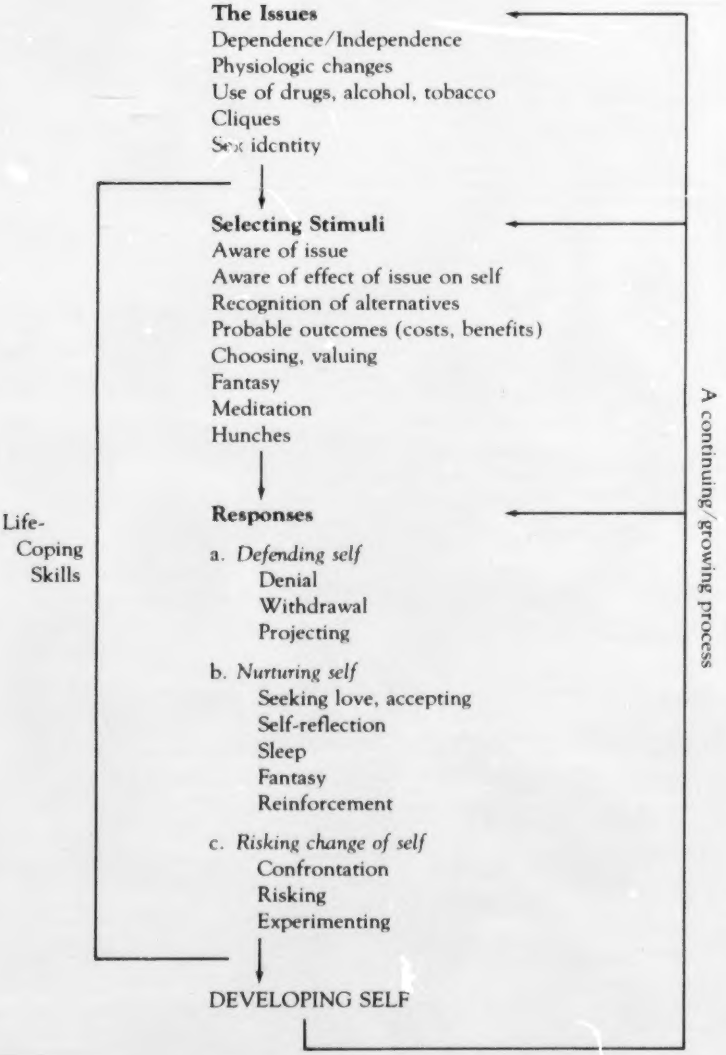
This brief description of more than three years of thinking by the AIT staff and twenty-one national consultants illustrates several central aspects of the conceptualization process.

First, modification of the *Inside/Out* conceptualization after teacher review indicates how input of various kinds can have an effect on the shape of a project. That it came from classroom teachers reflects AIT concern for review by ultimate users as well as administrators.

Secondly, the broad shift in the curriculum and theory bases of planning from *Inside/Out* to *Self Incorporated* is an example of the necessity of adjusting to the constantly changing nature of education. The project sequence began with an affective approach to health education and broadened into affective education *per se.* This shift also indicates that the consortium projects themselves have an effect on the environment in which they are used: the preliminary report for *Self Incorporated* makes a number of references to developments in the fields of affective education stimulated by *Inside/Out.*

The modification of the conceptualization of *Self Incorporated* between the preliminary report and the prospectus exemplifies a third aspect of the conceptualization process: recognition that projects must be adjusted to fit with needs and approaches as perceived in user agencies.

Figure 2
Life-Coping Skills Model



The Issues
Dependence/Independence
Physiologic changes
Use of drugs, alcohol, tobacco
Cliques
Sex identity

Selecting Stimuli
Aware of issue
Aware of effect of issue on self
Recognition of alternatives
Probable outcomes (costs, benefits)
Choosing, valuing
Fantasy
Meditation
Hunches

Responses

a. *Defending self*
    Denial
    Withdrawal
    Projecting

b. *Nurturing self*
    Seeking love, accepting
    Self-reflection
    Sleep
    Fantasy
    Reinforcement

c. *Risking change of self*
    Confrontation
    Risking
    Experimenting

DEVELOPING SELF

From *Life-Coping Skills Prospectus*
(Agency for Instructional Television: Bloomington, Indiana, September, 1974).

APPENDIX B: COST-STRUCTURE FOR CONSORTIUM PARTICIPATION

Life-Coping Skills
Consortium Agencies' Costs

1972 student enrollment Grades 1-12	Base fee if commitment made by: November 1, 1974	February 1, 1975	June 1, 1975
0- 500,000	$ 8,000	$ 9,500	$11,000
500,000-1,000,000	9,000	10,500	12,000
1,000,000-1,500,000	10,000	11,500	13,000
1,500,000-2,000,000	11,000	12,500	14,000
2,000,000 plus	12,000	13,500	15,000

In addition to the base figures set out above, each agency is assessed one-half cent (½¢) per child. The date of an agency's commitment is an important factor in determining that agency's participation cost.

Other costs are as follows:

One set of 15 high-band color videotape recordings	$1,425
One set of 15 16 mm color films	
Ordered as part of consortium agreement	1,350
Ordered apart from consortium agreement	1,875
Ordered by agency not associated with consortium	2,700

Normally, an agency's participation cost is the sum of the base fee for enrollment plus the assessment per child. However, the cost to any state or equivalent agency shall not exceed six cents (6¢) per student. Accordingly, the cost to such agencies with student enrollments of 145,000 or less shall be computed at the rate of six cents (6¢) per student.

Example of Participation Costs to One State or Province (Kentucky)

Base Fee	$ 9,000
Student enrollment (grades 1-12 at ½¢ per child)	$ 3,585
Sub-total consortium cost (total of above two lines)	$12,585
Videotape (1 set)	$ 1,425
Film (1 set)	$ 1,350
Teacher's guides (cost to be determined)	$ 4,000
Meetings	$ 900
TOTAL	$20,260

APPENDIX C:
CURRICULUM DESIGN EXAMPLES

A Complex Example: *bread & butterflies*

The prospectus for *bread & butterflies* set forth a broad framework for an affective education project that would enable children ages nine-to-twelve to accomplish the following goals in career education:

1. Develop a clearer, more positive understanding of self—their interests, abilities, values, and interpretations of the events in their lives.
2. Exert greater control over their lives through decision-making and planning.
3. Develop personal and interpersonal skills and attitudes essential to success in school and work.
4. Develop greater respect for other people and the work they do.
5. Develop a clearer concept of successful work behavior—the attitudes, skills, and responsibilities demonstrated by successful people at school and at work.
6. Develop skills necessary to gather, process, and act upon information about self in relation to a constantly changing work environment.
7. Relate their immediate experiences and decisions to their evolving career and development.
8. See the connection between school and the real world; understand the relationship between what they learn in school and the problems and activities outside the school.

These are exceptionally ambitious goals. They are also so broadly stated as to be extremely difficult to measure. Nonetheless, they expressed an intent and general direction that potential consortium members found useful.

The curriculum design team undertook to design lessons that would help students reach these goals.The first step in the process was to refine the goals. The resulting set of ten goals was somewhat less ambitious, but still very broad.

The team then constructed fifteen lessons according to a common format and related each lesson to the various goals. In constructing the lesson designs, the team recognized two types of learners: beginners, with little prior experience with career development, who needed to reach "awareness" of basic concepts; and more advanced students, who already understood basic concepts. These advanced students needed practice using and understanding the consequences of the concepts. Integrated lessons built from the on-screen experience and classroom activities described in the teacher's guide were then designed for each level.

A sample design for one lesson is reproduced below.

HUMAN DIGNITY

Rationale:

During the ages of nine-to-twelve, the young person comes into contact with an increasing range of people and workers and he becomes aware and anxious about his surface behavior and the surface behavior of others. He begins to formulate his own ideas and beliefs in reacting to the beliefs of others. At this stage, he begins to understand the significance of others and their tasks. He discovers significance for himself through awareness of and appreciation for others. As he works through this developmental task, he should acquire an understanding of the interdependency of mankind. Without a respect for and commitment to the worth of mankind as exemplified through work, whatever that work may be, the young person cannot truly come to believe in the dignity of man. For purposes of this episode, work is broadly defined to include significant activity whether paid or non-paid.

Goal:
To assist the student to discover that dignity resides in man, not the job; that one honors all honest work not because it contributes more or less to society in a standardized and currently accepted fashion, but simply because the worker is that individual broadly defined as one who enriches or maintains and thus contributes to society in a way that benefits us all.

Expected Outcomes:

Ages 9-10—The student will identify workers who directly affect his life everyday and explain how they contribute toward fulfilling his needs.

Evidences:

1. Records his list on the chalkboard and participates in a class or small group discussion in which he elaborates the contribution of each worker.
2. Discusses or role-plays the conditions that would prevail if the school were to be without the services of a custodian, a secretary, a principal, a teacher, or a student.
3. Gives a definition of workers to include non-paid functionaries such as homeworker, volunteer, and student, and describes several ways these workers affect his life.
4. Makes a drawing or painting to depict how various workers of his acquaintance express themselves in unique ways.
5. Makes a collage depicting how he perceives himself and his contributions to the school community.
6. Describes several characteristics he has in common with 1) a skilled worker, 2) a clerical worker, 3) a professional, and 4) an operative.
7. When asked to judge his peers in a group activity, does so in terms of their behaviors as individuals.

Ages 10-11—The student will list social problems which confront his community and describe how different workers of his acquaintance might contribute to the resolution of these problems.

Evidences:

1. Name several social functions which confront his community, ranks them in order of importance, and describes the expertise brought to these problems by 3 to 5 workers of his acquaintance.
2. Evaluates a person of a different sex, racial background, or occupation in terms of his individual behavior rather than a generalized stereotype.
3. Relates the contribution which various workers make to the resolution of his personal problems—e.g., the part a service station worker may play in bicycle safety.
4. Describes what he does or can do through his occupation as a student to aggravate or alleviate social problems.
5. Makes references in his writings or verbalizations which show that he is forming judgments as to how respect for human dignity can be related to the contributions one makes to others, no matter how small.

Ages 11-12—The student can identify and demonstrate ways that he may contribute toward fulfilling the needs of his community.

Evidences:

1. Identifies several behaviors for which he has been accorded greatest respect and gives an explanation as to how these behaviors may have affected the community.
2. Through a construction or service activity, demonstrates that he can make a contribution to the home, school, or neighborhood community.
3. Identifies a community need or problem, gathers information about it, and formulates a plan by which he himself, or together with classmates, might contribute toward meeting the need or resolving the problem.
4. Compares himself with a worker he respects, identifying similarities and differences in behaviors.
5. In a group activity that is process observed, demonstrates that he is gaining respect for himself by responding positively to his peer colleagues and purposefully to the task.
6. Demonstrates through a purposeful and constructive activity (art project, bicycle safety campaign, park clean-up) that he can make a useful contribution to the meeting of a community need.

Television and/or Film Program Concepts:

1. Show how dignity resides in every person and in many different forms and how it is expressed in diverse ways through the work that one does and through his several life roles.
2. Show a broadened concept of work and workers, to include significant activity that makes a social contribution whether paid or not.
3. Camera should show diverse workers, retired worker, child in school, paid employees, homemaker, volunteer, the artist, the producer of goods, etc.
4. Show lower level occupations with proud workers performing their tasks. Reveal that dignity can reside at all levels, but also show that a highly skilled toolmaker may feel like a second class citizen.
5. Show that one brings dignity to his relations; that one may contribute in ways other than productivity to achieve dignity.
6. Portray a situation where dignity is robbed—e.g., the black person, the engineer out of work.
7. The film should show the universal quest for dignity—e.g., women's lib, student rebellion, the black movement.

Suggestions for the Television and/or Film Writer:
This film might start by comparing man with things. Things can be dissected and manipulated without damage to their nature. Man, however, is not a thing. He cannot be dissected without being destroyed. He cannot be manipulated without being harmed. Man requires a dignity that can never be bestowed upon things. Dignity resides in the fact that human beings differ in their hereditary makeup and therefore in the possibilities they can realize. By shifting the scene from youngster to adult worker, the film should show how we could theoretically breed out much of human variety and how this would be a sacrifice. Of central importance, the film should demonstrate that diversity is the basis of collective achievement and the fact that the complement of diversity is tolerance and understanding. Create an attitude that our understanding of others and the work they do implies trying to understand the

workings of our own minds and seeing the irrationality of our own prejudices. Full impact of the program will be realized only if it can show finally that one's own dignity comes through overcoming the illusions one has about himself, giving up defenses and the certainty or uncertainty of meeting other's expectation—giving himself instead in an act of commitment, concern, and love.

Suggestions for Print Material:
Ages 9-10—Manual's pre-viewing activity might start by having the students identify those experiences in which they experienced a positive sense of proudness and those in which they felt a loss of dignity. Post-viewing discussion should be designed to elicit critical incidents in the film and in each student's experience which arouse indignation over the lack of worth accorded the individual. Specific examples should be cited and discussed.

Learning activities should aim to define the social worth of work by having students identify the contribution of a wide range of occupations to the well being of society. Each student might, for example, interview his mother or father about her or his job. All students then would report their findings to the class. A group discussion could follow the reports, with the class speculating as to what changes would occur in society if certain of the occupations were eliminated.

Another activity would divide the class into two groups of three or four to work on the following problem: We have a piece of land on which we are going to build and operate an elementary school. We can use workers from just *five* different occupations in both the building and actual operation of the school. Each group is to choose the five occupations they think would be most needed. They should consider as many occupations as they can, along with the following: construction contractor, carpenter, bricklayer, truck driver, electrician, plumber, janitor, architect, teacher, principal, cook, secretary, etc. Each group must then attempt to convince the other students that their occupations should be included in the final selection.

Ages 10-11—As a pre-viewing activity, the students will list a number of workers in the community with whom they are acquainted. Following the film, students will write a statement describing how each of the workers on his list contribute to the well being of the community. Discussion should follow.

Learning activities directed at studying the community and its problems and how workers contribute to the resolution of these problems should be structured and carried out over a period of several weeks. Students might consider inviting members of local community groups (e.g., mayor, councilmen, Lions, Urban League, AIM, Urban Coalition, Human Relations Commission, Rotary, JC's) to form a panel and discuss the needs of the community. Examples of needs: housing, playgrounds, parks, environment, traffic, etc. The students should then name the workers in the community who help meet that need. Have the students interview the workers to determine how the need can be met and report back to class.

Ages 11-12—Prior to viewing the film, the student will identify a social problem of the community which concerns him. Post-film discussion should center upon each student's involvement or lack of involvement in community problems. The potency or impotency that each feels in dealing with community problems should be brought out and discussed.

Learning activities at this level should be designed to get student involvement in the community and its problems. The teacher might discuss with students the idea that one of the most important things they can do while in school is to study the social problems that exist and to investigate various solutions. After this idea has been discussed, the students may brainstorm ways in which they might study and investigate

> the social problems they have identified. Guest speakers who are actively involved with the problem could be invited to the class. Ask the student to use the dictionary to define the word "dignity." Conduct a brief class discussion on the meaning of the phrase, "dignity in work."

This is a rather complete lesson plan. An important component of the design is the specification of expected outcomes, with a list of the kinds of evidence that a teacher might gather to find out if the outcome has been achieved. Note also the different nature of the expected outcomes for the three levels. This was the original approach; after a trial, the three levels were reduced to two because of redundancy.

A Less Complex Example: *Self Incorporated*

The prospectus for *Self Incorporated* specified fifteen integrated lessons designed to help students acquire "life-coping skills"—skills in dealing with emotional problems faced by children from eleven to thirteen. No specific goals were listed.

The instructional design for *Self Incorporated* was included with the prospectus. This design followed a lesson plan format that is much simpler than the one used for *bread & butterflies*. A sample lesson is given below:

> FAILURE—DISAPPOINTMENT
>
> **Rationale:**
>
> Acceptance of self is very important at this age. To grow toward self acceptance and maturity, one must learn to deal with feelings of failure. It is important to understand that coping with failure is in itself an example of success. In early adolescence enthusiasm and expectation, coupled with a minimum of experience and low performance skills, often lead to minor failures. The skills necessary for coping with failure are very important and are useful throughout life.
>
> **Purpose:**
>
> To stimulate classroom discussion and provide learning opportunities that help students understand failure and disappointment; to provide a model of successful handling of failure; to provide opportunities to discuss feelings associated with failure; to become aware of the cycle of recovery and to learn skills to deal with failure.
>
> **Story Comments:**
>
> The story should be that of a young person with great expectations whose attempts at accomplishment are not successful. The program should show the recovery cycle (from shock, humiliation, rage, and rationalization through withdrawal, depression, tears, sleep, to talk with others, humor, re-preparation, and finally willingness to try again). An example might be a swimmer or a tennis player who makes great preparations for a competition and loses.
>
> **Learning Activities:**
>
> Evaluate the negative view of failure that is often expressed.
>
> Discuss ways students learn from failure or from being greatly disappointed.
>
> Practice skills required during recovery from failure: talking it over, fantasies about the situation, re-preparation, etc.

The design team for *Self Incorporated* was able to use this simple format partly because of the design thinking that had created *Inside/Out* a few years earlier. The television format—open-ended drama—was, for example, already rationalized and accepted. In addition, all but one of the production agencies for *Self Incorporated* had also produced for *Inside/Out* and needed less guidance.

Simple though it is, this lesson design contains an important design concept. The *purpose* of the lesson, which was derived from experience with *Inside/Out*, is to "stimulate classroom discussion . . . ." The designers of *Self Incorporated* hoped to create a certain pattern of classroom interaction; they did not set out to achieve *particular* outcomes in terms of student learning, as was the case with *bread & butterflies*. Evaluation of *Self Incorporated* was thus focused to a great degree on whether or not programs achieved the desired classroom discussion. Clearly, these discussions were expected to produce changes in the "life-coping skills" of learners. But the nature of the discussions, not the changes, is what is specified.

The instructional design for *Self Incorporated* contains an additional feature worth noting. Ten lessons are presented as complete; three are identified as needing further work; and two are left open for suggestions from consortium members. This "wild card" strategy for consortium member involvement in design was the result of several events: (1) the design team believed that the consortium agencies would appreciate having the opportunity to identify additional program themes and ways of refining themes; (2) the team itself did not have strong feelings about the themes of the additional two programs; and (3) the script writers were eager to offer ideas of their own to the consortium after having had time to reflect on the design team's thinking.

The total design for *Self Incorporated* also included designs/plans for utilization materials and school/community awareness materials.

APPENDIX D:
WRITER/EDUCATOR INTERACTION IN DESIGN

The following are excerpts from documents written about the Self Incorporated *program "Two Sons" by writer John Allman and educational consultant Mary Williamson. They illustrate the kind of dialogue between educator and creative communicator that goes into the creation of a consortium project television program.*

Comments on "Two Sons" by Its Writer, John Allman

I felt an obligation to get at the complexity of (a) the way people in a close group treat and mistreat each other and (b) the mind-state of the greatest victim. I personally feel that style has substance and that if you want a drama to go deep into a life situation you have to go wide into fragments and flux. Meaning comes through hints and tones and impressions, not through direct statements.

I tried to let the moods of the characters create the flow of the film. It would take me pages to delineate these. In simplest terms, it's a pitched battle between dad's will and Greg's; mom tries to break through this battle and finally fails even when she has Greg alone at the restaurant, so her emotions break out in the last scene (in general, she is an emotionally expressive person); mom's emotional break first brings the battle between dad and Greg to a head, then engulfs it so that first Greg and then dad finally express their feelings and speak from the gut. At this point hope can begin. The truly pathetic character and the only one who doesn't change is Jimmy. He's a spectator and sometime participant in his brother's pain, and his governing principle is to hoard the approval of his parents, especially his father.

This film started for me with the notion of doing a story in a moving car and that the intensity of that physical condition could be used to resonate the emotions of the characters. I would hope that somewhere some kid will watch the film and say, "You know, life in a troubled family is like being in a sealed car pushing down a highway with a radio blaring." Frankly, I don't expect any kid to say such a thing, but I would hope that many would feel something to this effect.

One depends on fortuitous choices of words to tell us what life processes are really about. I would propose the phrase "the cost of discrimination" as closer to the heart of this film than any I've yet heard. Any family with two or more children is vulnerable to a kind of slotting which is destructive of the individual potentials of both the good children and the bad. "Two Sons" depicts a sycophant and a rebel. Both are alienated from themselves in how closely their character is tied to the parents, especially the father.

To me, it's important that *dynamics* in almost all families *cast kids* in different roles. This can become a terribly destructive process, especially when the parents fail to realize the consequence of their habits and predispositions and when the family falls out of *communication* (a lot of the show is about the breakdown of communication). "Good child" is not complete because he sells out himself (and his brother) in order to get parental approval. How will he ever become an integrity with his sense of worth enslaved to his approval? "Bad child" is not complete because he's having to commit his character in opposition to his parents. He is establishing a negative identity (he is at least establishing an identity and may, with time and distance from his parents, develop his positive self).

For me then, the purpose of the show is to increase consciousness of family (or other group) role-typing and to demonstrate the terrible importance of the need for communication. To look at it from the other side, if we slot people (in this case, if parents slot children) and try to operate, as dad does, on the clashes of will, then we shall realize only a fraction of our potential.

The climactic moment in the film is when Greg's emotions break through and he pleads, "You never, ever try to understand me. Please, just once, would you try to understand me?!" I would propose starting the discussion with what he means.

Also, I would propose that the central "coping skill" shown in the film is the ability to speak from the gut, as mom and Greg and even dad do in the last scene. I think it's probably the only coping skill which can get families like those in the movie past their crisis without terrible waste. And it's a coping skill we all need to develop.

From the Consultant's Report by Mary Williamson

John Allman had hoped from the first that this problem of a younger son trying to cope with an older "good guy" brother would be accepted by AIT as a subject for *Self Incorporated*; so when he was given the script assignment he already had a plot well formulated. During the writing he was searching for some good scenes of brotherly conflict for use in flashbacks so I arranged a meeting between John and six Hanley students who had problems with older brothers. When I dropped by the guidance office to ask the counselors to suggest some students, I was amazed at the number of boys they quickly thought of who could give lots of ideas. Brothers must be a common problem.

I showed the completed script to several English teachers who knew the two student "stars" of the show and they were as enthusiastic as I was about the plot and dialogue. Most of the filming occurred outside of school, but we simulated a sheriff's office for one of Hanley's vice-principals to play a short scene as sheriff, and there were two other scenes, a teacher talking to Greg and a gym class scene which were filmed briefly in an afternoon. I did some work recruiting the staff to take the bit parts (not everyone can be a star), but the logistics of filming were handled through the administration.

On April 7 I transported six students to the television station for a look at the rough-cut of "Two Sons." The last three or four minutes of the film (the most crucial part for discussion) were still not edited, but I got some ideas about comprehension and interest level. There were some fairly sophisticated editing techniques which created interest but also confusion for some students. Film deadline forced John to submit the film for final processing without another rough-cut viewing for me so I worked very extensively with comprehension testing when I received a videotape of the show late in April.

The school had recently received a color TV which played videocassettes and many teachers were reluctant to use it, fearing they would break something or not be able to get it to work. So I showed the tape to my classes and then trained two of my "careers in communication" students to work the cassette machine. As before, I concentrated on free discussion with my students, searching out points of confusion, following up topics which seemed to come naturally. I had three writing classes sketch any person in the show. Several had fun writing about the sheriff. My more advanced composition classes did comparison and contrast paragraphs about the two sons in the film or about themselves and a brother or sister. Although many students did not write directly about the film, I got enough feedback from discussion and the essays to feel confident that there were some problems in comprehension of the film but that the overall coping problem was understood by most students.

I set up a schedule for all of the other English teachers to show the videocassette. They were encouraged by the fact that they would not have to touch the TV. I scheduled two showings an hour for two weeks and let the teachers sign up for the most convenient schedule which would fit with their lesson plans. The TV set was stationed in an activity room so we didn't have to transport it around to the different classrooms. Classes who viewed the show at the beginning of the hour were asked to fill out a comprehension sheet (part of the AIT evaluation process). If the students saw it at the end of the hour I just asked teachers to lead whatever discussion seemed interesting in the time remaining.

Things worked well technically. My students worked the machine, the pile of questions was dutifully distributed and completed, the classes filed in and out of the room at the proper time; but within two days teachers began contacting me to cancel the showing for this class or that class. Several problems became clear, the most important one being that many students and some teachers did not understand the program. It was simply too confusing for many students who then lost interest and began creating discipline problems. The teacher, then, could not concentrate either and many teachers decided that rather than argue with kids to get them to watch a television program they would simply cancel the program. Teachers were also a bit embarrassed that they could not answer all of the questions on comprehension. One said to me, "I know if I could just sit and watch it by myself I would understand it a lot better."

This problem points up a philosophical issue which John and I have discussed all year: Should the film be understood completely by all students? If we shoot for complete comprehension will it be too easy for some students? Like the remark about Kafka in "Pressure Makes Perfect," should there be some remarks or side action that will only be appreciated by the teacher and a few bright students? There is also the problem of continuity. In a classroom with thirty junior high students some distraction is inevitable. But if a distraction loses many students from an understanding of the plot the whole show loses its effectiveness.

These are questions which we have not satisfactorily resolved. But the basis of testing which I tried here of voluntary scheduling seemed in itself a good indicator. If it's a good film, teachers will want to show it and the students will want to see it. (The grapevine travels fast in a junior high). When the teachers cancelled the viewing it was significant that no students complained. If it had been a popular film the teachers would have received a lot of pressure to show it.

John suggested that maybe the questionnaire had put an artificial burden on the film—the tyranny of the right answer. But half of the classes were not given a questionnaire and those teachers were not enthusiastic either.

I tabulated the results of the questionnaire and sent them along with my own observations and suggested revision to John and Saul Rockman (AIT Evaluation Director). I understand that the film will be further revised before a final copy is made.

APPENDIX E:
TEACHER'S GUIDE EXAMPLE

from the
Guide to Self Incorporated

(Failure and Disappointment)

PROGRAM

Terri wants to be a cheerleader very much. She has practiced hard and, although she's nervous, she feels ready for the tryouts. Even so, desire, practice, and enthusiasm are not enough. She is not among the ten boys and girls chosen by the faculty committee as the cheerleading team for next year.

At first Terri is numbed by her failure. But soon she goes out to play tennis, almost denying the existence of her defeat. Later in the day, she begins to accept reality, and is overwhelmed by sadness. A heart-to-heart talk with her dad that evening is the turning point in her recovery, and the bitter humor and long discussions with her friends are part of the healing process. Finally, as the summer progresses, Terri begins to prepare herself to risk failure once again.

Terri has reached for too much and has failed. However, through experiencing the cycle of failure and recovery she has found increased maturity—an achievement greater, perhaps, than becoming a cheerleader.

Many times adolescent enthusiasm coupled with clumsiness and a lack of experience leads young teenagers into minor failures. This program provides a model of a young woman coping with failure in a reasonable way. Reinforced by the learning activities, the lesson should help students become aware of the failure cycle, and learn skills for dealing with their own setbacks.

QUESTIONS

1. "What's there to lose?" Does Terri have anything to lose? Why? How did Terri cope with failure and disappointment?
2. Sometimes when you achieve something it becomes unimportant. Sometimes when you fail at something it becomes less important than you thought. Sometimes when you think something is really important it becomes less important as time goes by.

   Can you think of an experience that illustrates each of these points? Explain. What were your feelings and how did you handle the situation?
3. "Sometimes you want something very much. You don't know why, it just means a lot to you." Why did becoming a cheerleader mean a lot to Terri? How did she feel when she was not chosen? How did she react? How would you have felt and reacted?
4. How did Annette and Terri support each other when they lost? Do you think their reactions were helpful ways of coping? Why? Do you think the boys who played tennis with them helped? Why?
5. How did you feel Terri's father dealt with her behavior at home? Dad said, "Linda, I'm going to do something now that a parent should never do. I'm going to tell you to make the salad." Why did he feel parents should not do this?
6. Terri's father said: "In your life you're going to succeed at some things and fail at others. Just try to always do your best." What do you think of his advice? Was Terri's father proud of her?
7. What worried Terri most about losing? What do you dread the most when you lose at something? What do you feel good about?

ACTIVITIES

1. EXPLORING WAYS TO COPE

Ask the class to generate a list of "situations" that cause teenagers to experience feelings of failure and disappointment.

Next divide the class into teams, appointing one team to act as judges. Each team should study the ways that teenagers would most likely cope with failure and disappointment during a particular historical era. (The teams might be called the "1770 Copers," "1870 Copers," "1970 Copers.") Each team competes by presenting a skit portraying, as accurately as possible, successful coping skills from their particular era. (Criteria for judging the performances should be established by the judges in consultation with each team. Since methods of coping change over the years, the criteria for a good performance may be different for each team.)

Judges should then select several failure and disappointment situations for all the teams to deal with. Each team should prepare a skit for each issue to show how teenagers who lived during the team's chosen historical era might handle the situation. (For example, getting poor grades in spite of studying hard.) After all the skits have been presented, the judges should select the team that "coped the best" given that team's criteria for successful coping.

After the activity, discuss as a class: how teenagers during different historical eras coped with failure and disappointment, what type of coping pattern students find personally satisfying, and coping behaviors that might be useful for dealing with failure and disappointment in their own lives.

2. HOW OTHERS COPE WITH FAILURE

Students should think about people they know, or would like to study, who have experienced failure and disappointment in the course of pursuing a goal. Students might want to consider people in sports, the arts, politics, business, religion, science, education, etc.

Have students consider:

- Whether the people were able to reach their goals in the end.
- How they coped with their failures and disappointments.
- How they may have altered the way in which they were seeking their goals.

Finally, plan a special "sharing day" when each student "becomes" the character he or she studied. Students can present their findings in the form of a play, puppet show, charades, audio-visual presentation, etc.

3. "RISKY" PROFESSIONS

Students should identify professions—baseball, hockey, horse-racing, politics, the military, rock & roll, stock investing—where success and failure are a part of everyday life. Have students write letters to people in such fields asking them how they cope with success and failure. What patterns emerge? What are the pressures in such professions?

Have students identify jobs where failure *must* be avoided (knife-thrower at a circus, air traffic controller, a surgeon, person in charge of nuclear weapons, skydiver, etc.). Have students write to or interview people in such jobs. Students might also study statistics on occupational stress and its effects on people in these fields. Discuss: What problems do people have in such situations? How do they cope? Do some people cope more successfully than others?

4. MOVING TOWARD SUCCESS

Prepare a large wall chart with a place for each student to write these items for two consecutive weeks:

My goal for the week and the risks involved.

My successes (related to goal).

My failures (related to goal).

My feelings about the goal and the related pressures.

Directions:

For the sake of privacy, assign each student a number for identification rather than using names.

On Monday of each week students should set their goals for the week.

During the week students up-date the chart whenever something pertinent happens.

Every Friday spend 45 to 50 minutes discussing student activities, successes, failures, feelings, etc. At these meetings, students should help each other accurately access failures and successes and perhaps suggest ways to cope with failure realistically. The tone of these discussions should be supportive and relaxed. Students should try to be open about their feelings, and make positive suggestions to others.

Sample Chart

Week 1	Student 1	Student 2	Student 3
Goal:	Cheerleader-might fail		
Successes:	Learned 2 cheers		
Failures:	Didn't practice Tues.		
Feelings:	Felt good		
Week 2 Goal: Successes: Failures: Feelings:			

5. IDENTIFYING GOALS

Have students complete an activity sheet where they:

1. Identify the goals they want to achieve.
2. Decide how badly they want to achieve those goals, compared to the other things that are happening in their lives.
3. Identify the feelings they would have if they reached the goal. If they failed?
4. List personal feelings and attitudes that can help them as they work toward their goals. (I'm improving, I'm getting better, I'm practicing.)
5. List feelings and attitudes that might be obstacles. (I can't, I won't, I'm afraid. I don't want to.)
6. List "external" things that might block achievement. (Lack of time, no equipment, lack of money, resistance from others, bad luck, poor skills, inappropriate goal.)
7. List sources of help that might be available. (Private lessons, parents, expert advice from a professional, friends, etc.)

This activity sheet could be set up as a "balance sheet" of assets and liabilities. Discuss with students: How can the liabilities be changed into assets?

Sample Work Sheet

Goal: *To be a cheerleader*

	Assets	Liabilities
How badly do I want to achieve this goal?	Very Much	
How would I feel if I achieved the goal?		Worried that I wouldn't do well at the football games.
Feelings that help	I'm getting better	
Feelings that are obstacles		I'm afraid to try
"External" things that might get in the way		No time to practice; must do homework first.
Sources of help	Older sister was a cheerleader	
Totals:	3	3

APPENDIX F:
PRODUCTION SCHEDULING

***Self Incorporated* Project Production Schedule as of January 3, 1975**

WORKING TITLE	PRO-DUCER	ACTUAL TITLE	TREATMENT WRITTEN	SCRIPT COMPLETED
1. Changes ✓	NVETA ⑦		Nov. 74	MARCH 75
2. To Try/Not Try ✓	① NVETA	Trying Times	Oct. 74	Nov. 74
3. Let's Meet-First Date ✓	② NVETA	Getting CLOSER ~~Together~~	Oct. 74	Nov. 74
✓ 4. Everyday Pressures	① UNIT	What's Wrong With Jonathan?	Oct. 74	Nov. 74
5. Cliques	UNIT ③			
6. They Say	KETC		FEB 75	APRIL 75
7. Failure/Disappointment	KETC		FEB 75	
8. Privacy ✓	NVETA ②	No Trespassing	Nov. 74	JAN. 75
9. Pressures To Achieve ✓	KETC	Pressure Makes Perfect	Oct. 74	Nov. 74
10. Differences ✓	UNIT ②	MY FRIEND (?)	Jan. 75	FEB 75
11. Sex Role Identification CALIF.	⑥ NVETA		FEB 75	MARCH 75
12. Morality (You Cheated) JAN	⑤ NVETA	WHO WINS ?	Dec. 74	FEB 75
13. Familiy MATTERS (ROB)	NVETA ④	FAMILY MATTERS	JAN 75	JAN 75
14. SIBLING DIFFERENCES ~~To Be Decided following Consortium Meeting~~	② ~~NVETA~~ KETC	TWO SONS	FEB 75	FEB 75
15. FAMILY " ADVERSITY	NVETA ~~KETC~~ ⑤			

IN PRODUCTION	EDITING STAGE	TESTING	COMPLETED	TEACHER'S GUIDE WRITTEN
Nov/Dec. 74	Dec. 74	FEB 75	APPROVED 3/20/75 For testing Feb. 75	1st Draft
Nov/Dec. 74	Dec. 74	MAR 75	FOR TESTING MARCH 75	
Nov/Dec. 74	Dec. 74	FEB 75	For testing Feb. 75 RE-DO SCHEDULED	
JAN 75	JAN. 75	APRIL 75	FOR TESTING APRIL 1 75	
Nov/Dec. 74	Dec. 74	FEB 75	For testing Feb. 75 SCHEDULED FOR RE-DO	
FEB 75	FEB 75			
MARCH 75				
MARCH 75	MARCH 75			
FEB 75	FEB 75			
MARCH 75	MARCH 75			

APPENDIX G: AIT RESEARCH AND EVALUATION POLICY

1. Each AIT project and activity shall have a research and evaluation component, appropriate to its goals.

2. AIT shall restrict its research and evaluation efforts to decision-oriented and product-specific research and evaluation.

   AIT should cooperate with, but not sponsor, basic or theoretical research. Empirical data collected for AIT projects should be made available to consumers and researchers in appropriate fields.

3. All research and evaluation shall be judged by the criterion of utility in the various decision-making processes.

   This utility will be enhanced if the consumer can be involved in setting the specifications for the research and evaluation projects.

4. Background research and in-house policy research shall be established as a permanent and integral part of AIT.

   Background research should include local, state and provincial resources for educational and telecommunications systems data. The information collected should be disseminated when it is comprehensive and pertinent.

5. Formative evaluation of AIT projects shall be conducted by an in-house research and evaluation staff, working in conjunction with the production team.

   A prerequisite to appointing production decision-makers should be their willingness to work with formative evaluation in the improvement of the product.

6. In production projects, formative evaluation shall receive priority allocation of research and evaluation resources.

   Formative evaluation designs should include learner verification of the learning objectives. Summative evaluation, in some form, should be conducted; but funding for this area is secondary to formative evaluation. Summative evaluation data on the use and effects of AIT products should be collected and disseminated by AIT.

7. If undertaken, major summative evaluation projects shall be conducted by independent research groups.

   Control over the design of major summative evaluation and instruments used should remain with AIT.

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